NEC

PART NO. 599910603

SERVICE MANUAL

COLOR MONITOR **MultiSync® LCD1920NX**

MODELS LCD1920NX (A)/-BK(A)/(B)/-BK(B)

NEC-MITSUBISHI ELECTRIC VISUAL SYSTEMS CORPORATION

AUGUST 2002

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WARNING

The SERVICE PERSONNEL should have the appropriate technical training, knowledge and experience necessary to:

- Be familiar with specialized test equipment, and
- Be careful to follow all safety procedures to minimize danger to themselves and their coworkers.

To avoid electrical shocks, this equipment should be used with an appropriate power cord.

This equipment utilized a micro-gap power switch. Turn off the set by first pushing power switch. Next, remove the power cord from the AC outlet.

To prevent fire or shock hazards, do not expose this unit to rain or moisture.



This symbol warns the personnel that un-insulated voltage within the unit may have sufficient magnitude to cause electric shock.



This symbol alerts the personnel that important literature concerning the operation and maintenance of this unit has been included.
Therefore, it should be read carefully in order to avoid any problems.

PRODUCT SAFETY CAUTION

1. When parts replacement is required for servicing, always use the manufacturer's specified replacement.
2. When replacing the component, always be certain that all the components are put back in the place.
3. As for a connector, pick and extract housing with fingers properly since a disconnection and improper contacts may occur, when wires of the connector are led.
4. Use a proper screwdriver. If you use screwdriver that does not fit, you may damage the screws.

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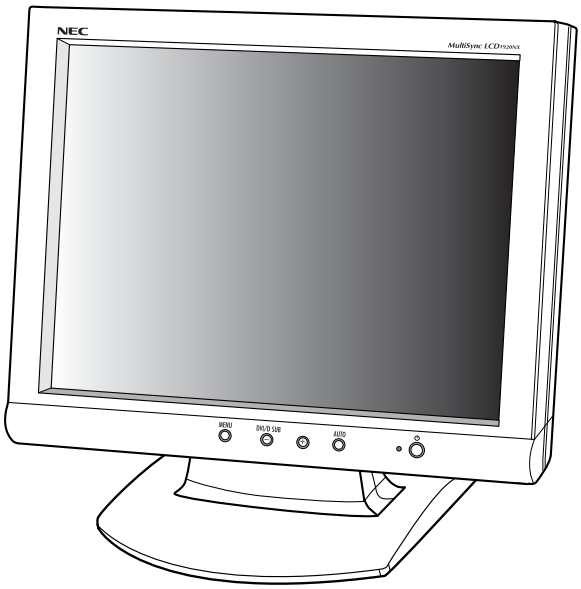
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USER'S MANUAL

1. A Version

NEC



USER'S MANUAL

MultiSync® LCD1920NX™

To learn about other special offers, register online at www.necmitsubishi.com/productregistration

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WARNING

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO, DO NOT USE THIS UNIT'S POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS UNLESS THE PRONGS CAN BE FULLY INSERTED.
REFRAIN FROM OPENING THE CABINET AS THERE ARE HIGH VOLTAGE COMPONENTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

CAUTION

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, MAKE SURE POWER CORD IS UNPLUGGED FROM WALL SOCKET. TO FULLY DISENGAGE THE POWER TO THE UNIT, PLEASE DISCONNECT THE POWER CORD FROM THE AC OUTLET.DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol warns user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

Canadian Department of Communications Compliance Statement

DOC: This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

C-UL: Bears the C-UL Mark and is in compliance with Canadian Safety Regulations according to CAN/CSA C22.2 No. 950.

FCC Information

1. Use the attached specified cables with the MultiSync LCD1920NX (L19GC061) color monitor so as not to interfere with radio and television reception.
   (1) Please use the supplied power cord or equivalent to ensure FCC compliance.
   (2) Please use the supplied AC Adapter.
   (3) Please use the supplied shielded video signal cable.
   Use of other cables and adapters may cause interference with radio and television reception.
2. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
   - Reorient or relocate the receiving antenna.
   - Increase the separation between the equipment and receiver.
   - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
   - Consult your dealer or an experienced radio/TV technician for help.

If necessary, the user should contact the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet, prepared by the Federal Communications Commission, helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

Getting Started

Congratulations on your purchase of this LCD Monitor.
Please read this section carefully to get an instant understanding of this product and its correct operations.

Important! Please keep the original carton and all packing materials for future shipping needs.

Package Contents

Your LCD Monitor package includes the following items:

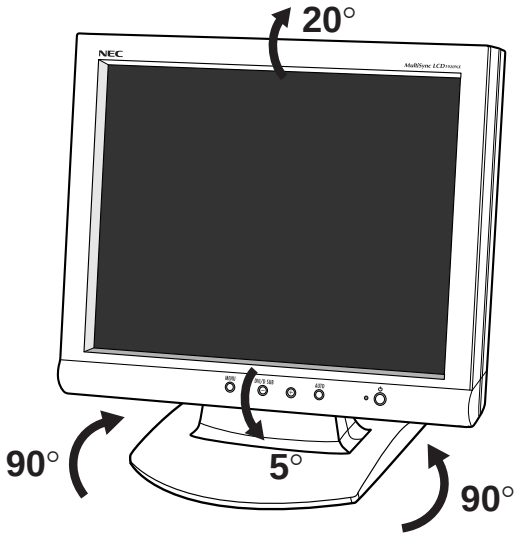
- 19" LCD Color Monitor
- Signal cable with 15 pin D-Sub connector
- AC Adapter
- Power cord
- User's Manual

Unique Features

- 8-bit panel, supporting 16.7M true colors
- High brightness & high contrast, providing more vivid images
- Built-in both analog and digital interfaces
- TCO'99 and TCO'95 approved
- Composite sync compatibility
- Five languages in OSD (On Screen Display)
- 9-stage smoothing function
- Supports 19 sets of factory preset modes and 32 sets of user's automatically saved modes
- Wide Viewing Angle

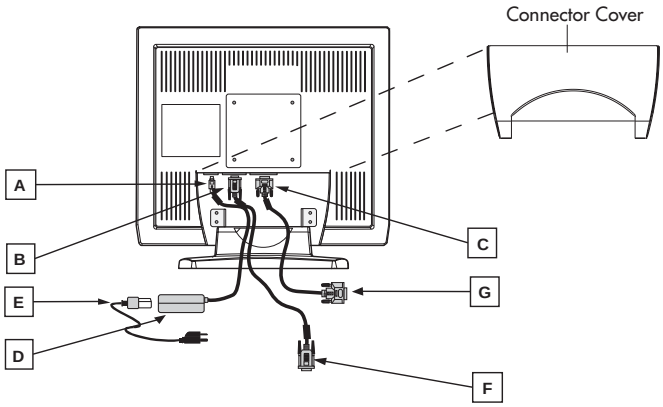
Adjusting the Monitor

Press down on the stand and gently adjust the monitor to a suitable viewing angle (see Figure below). Please note that this monitor can only be tilted forward to 5 degrees, backward to 20 degrees, and swiveled 90 degrees left/right. To prevent damage to the monitor, do not press the screen over its tolerant angles.



Quick Installation

- Make sure the computer is turned off.
- Attach the female end of the power cord (**Indication E**) to the AC adapter (**Indication D**), then plug the AC adapter connector to the power "DC-IN (**Indication A**)" jack of the LCD monitor.
- When using a power cord, plug the male end into the wall socket.
- Plug one end of the 15 pin D-SUB signal cable (**Indication F**) in the "D-SUB" video signal connector (**Indication B**) of LCD monitor. If using a digital signal, plug one end of the 24 pin DVI-D signal cable (**Indication G**) in the "DVI-D" video signal connector (**Indication C**) of LCD monitor.
- Turn on the computer.
- Turn on the LCD monitor.
- Before operating the monitor, please refer to page 6 "Operations" first.



A. DC In
B. D-SUB
C. DVI-D
D. AC Adapter
E. Power Cord
F. D-SUB Signal Cable
G. DVI-D Signal Cable (not included)

NOTE : When operating this LCD monitor with an AC125-240V power source, please refer to "Recommended Use" for proper power cord selection. Use supplied AC adapter.

Quick Installation *–continued*

Remove Monitor Stand for Mounting

To prepare the monitor for alternate mounting purposes:

1. Disconnect all cables.
2. Place monitor face down on a non-abrasive surface **(Figure R.1)**.
3. Remove the 4 screws connecting the monitor to the stand and lift off the stand assembly **(Figure R.1)**. The monitor is now ready for mounting in an alternate manner.
4. Connect the AC cord and signal cable to the back of the monitor.
5. Reverse this process to reattach stand.

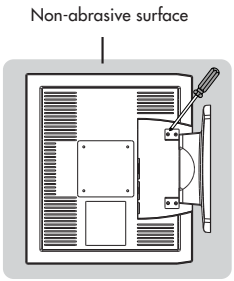


Figure R.1

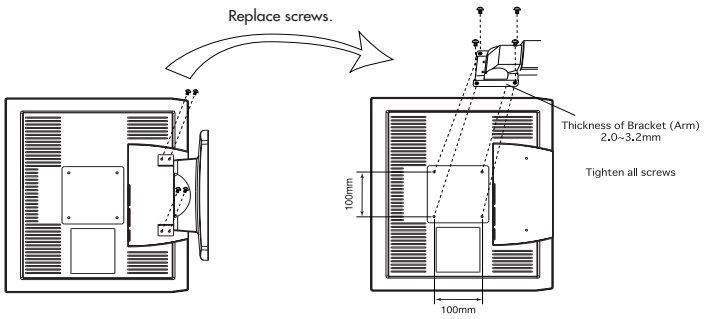
NOTE: Use only VESA-compatible alternative mounting method.

6. This LCD monitor is designed for use with a flexible arm.

   Please use the attached screws (4pcs) as shown in the picture when installing.

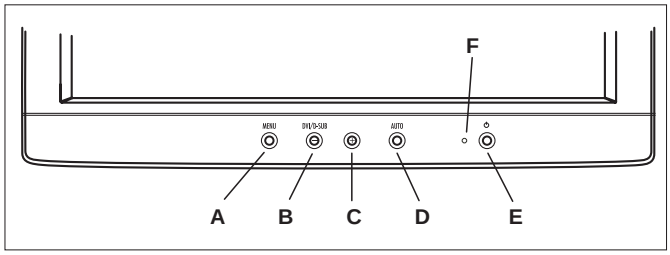
   To meet the safety requirements, the monitor must be mounted to an arm which guaranties the necessary stability under consideration of the weight of the monitor.

   The LCD monitor shall only be used with an approved arm (e.g. GS mark).



Operations

To turn the monitor on or off, push the power button (**Indication E**) on the front of the monitor. When the power light (**Indication F**) turns green, the LCD is ready to use.



Function Keys

A. MENU	1. Press this button to turn on the OSD (On Screen Display) main menu. 2. Press this button to activate selected items. 3. Press this button 2 seconds or more to turn off the main menu.
B. [–]	1. To scroll down the menu. 2. To decrease the value of selected item.
C. [+]	1. To scroll up the menu. 2. To increase the value of selected item.
D. AUTO	Press this button to activate "AUTO SYNC" function.
E. Power switch	Press this button to turn on/off the monitor.
F. Power LED	When the light is green, the power is on; amber light is when the power is off or in power saving mode.

Hot Keys

- **Auto-Sync:** Press the [AUTO] button to activate Auto Sync.
- **Auto-Contrast:** Press the [+] button to activate the Auto Contrast adjustment.
- **Change Signal Input:** Press the [–] button to change the signal input, "DVI" or "D-SUB".

OSD Main Menu

For screen adjustments, press the [MENU] button to display the OSD (On-Screen Display) Main Menu shown below. Press the [+] or [–] button to scroll up or down the menu to your required options. Please note that the OSD will automatically turn off in 30 seconds without any manipulation or by simply pressing the [MENU] button for 2 seconds.

CONTRAST: Adjusts the contrast level of the screen image. Under Main Menu, select CONTRAST using the [+] or [–] button, then press [MENU] button to activate the function. Press the [+] button to increase contrast, [–] button to decrease contrast. Press [MENU] to return to Main Menu.

AUTO-CONTRAST: Automatically adjusts the contrast level of the screen image. Press [+] or [–] button to select AUTO CONTRAST, then press [MENU] button to activate AUTO CONTRAST.

VIDEO ANALOG/DIGITAL: Switches between analog and digital input signal. Press [+] or [–] button to select VIDEO ANALOG or VIDEO DIGITAL, then press [MENU] button to switch.

BRIGHTNESS: Adjusts the brightness level of the screen image. Under the Main Menu, select BRIGHTNESS using [+] or [–] button, then press [MENU] button to activate the function. Press the [+] button to increase the brightness, [–] button to decrease the brightness. Press [MENU] to return to Main Menu.

COLOR Sub-Menu:

- Under the Main Menu, select COLOR using the [+] or [–] button, then press [MENU] button to activate the COLOR Sub-Menu.
- Under the COLOR Sub-Menu, press [+] or [–] button to scroll up or down to your desired preset color mode. Then press [MENU] to activate the mode.
- Choose user's mode by adjusting R, G, B respectively. Press the [+] or [–] button select R or G or B bar, then press [MENU] to activate the adjustment. Press the [+] or [–] button to adjust the values, then press [MENU] button to save the value and return to color Sub-Menu to adjust another color. After adjusting R, G, B colors, press [MENU] to return to Main Menu.

MENU **MAIN MENU:** Returning to OSD main menu. Press [+] or [–] button to select MAIN MENU, then press [MENU] button to return to OSD Main Menu.

OSD Main Menu –continued

LCD ADJUST Sub-Menu (Analog input only): Under the Main Menu, select LCD ADJUST using the [+] or [–] button, then press [MENU] button to enter LCD ADJUST Sub-Menu.

PC/MAC: Switching between PC at 800X600 resolution and MAC at 832X624 resolution, using [+] or [–] button. Then press [MENU] to initiate the switch between PC and MAC shown as above.

H SIZE: Adjusting the width of the screen image. Select H-SIZE, using [+] or [–] button, then press [MENU] button to activate the function. Press [+] button to increase the width of the screen image, press [–] button to decrease the width of the screen image shown below. Press [MENU] to return to LCD ADJUST Sub-Menu.

H - POSITION: Moving the screen image to the right or left. Select H - POSITION using the [+] or [–] button, then press the [MENU] button to activate the function. Press [+] button to move the screen to the right, [–] button to move to the left. Press [MENU] to return to LCD ADJUST Sub-Menu.

V - POSITION: Moving the screen image up or down. Select V - POSITION using the [+] or [–] button, then press [MENU] to activate the function. Press [+] button to move the screen image up, [–] button to move down. Press [MENU] to return to LCD ADJUST Sub-Menu.

FINE TUNE: Aligning the performance slightly. Select FINE TUNE using the [+] or [–] button, then press [MENU] button to activate the function. Press [+] or [–] button until the screen image looks crisp, sharp and focused. Press [MENU] to return to LCD ADJUST Sub-Menu.

AUTO-SYNC: Automatically adjusts the image to the best performance. Press [+] or [–] button to select AUTO SYNC, then press [MENU] button to activate AUTO SYNC.

NOTE: • **When setting up this monitor for the first time, perform AUTO-SYNC before use.**

• **To perform AUTO-SYNC, first display an image that makes the entire screen very bright.**

MENU **MAIN MENU:** Returning to OSD main menu. Press [+] or [–] button to select MAIN MENU, then press [MENU] button to return to OSD Main Menu.

LANGUAGE: Selecting preferred language used in the OSD menus. Under Main Menu, scroll to Language using [+] or [–] button, then press[MENU] button to activate the function. Press [+] or [–] button to choose preferred Language, then press [MENU] to return to Main Menu.

MENU **MAIN MENU:** Returning to OSD main menu. Press [+] or [–] button to select MAIN MENU, then press [MENU] button to return to OSD Main Menu.

OSD Main Menu *–continued*

MISC Sub-Menu
Under the Main Menu, select MISC using the [+] or [–] button, then press [MENU] button to enter MISC Sub-Menu.

RESOLUTION NOTIFIER: This optimal resolution is 1280 x 1024. If ON is selected, a message will appear on the screen after 30 seconds, notifying you that the resolution is not at 1280 x 1024.

H-OSD POSITION: Moves the OSD position on the screen to the right or left. Select H-OSD POSITION using [+] or [–] button, then press [MENU] button to activate the function. Press the [+] button to move the OSD position to the right, [–] button to move left. Then press [MENU] to return to MISC Sub-Menu.

V-OSD POSITION: Moves the OSD position on the screen up or down. Select V-OSD POSITION using [+] or [–] button, then press [MENU] button to activate the function. Press the [+] button to move the OSD position up, [–] button to move down. Then press [MENU] to return to MISC Sub-Menu.

SMOOTHING: Makes the displayed texts smooth. Select SMOOTHING using [+] or [–] button, then press [MENU] button to activate the function. Press [+] or [–] button and adjust to your liking. Press [MENU] button to return to MISC Sub-Menu.

INVISIBLE: Activates the OSD background to be invisible. Select INVISIBLE using the [+] or [–] button, then press [MENU] button to select either On or Off option.

INFORMATION: Displays the timing mode (video signal input) coming from the graphics card in the computer. Select INFORMATION using the [+] or [–] button, then press [MENU] to display the mode. Then press [MENU] button to return to MISC Sub-Menu.

RECALL: Returns the adjustments back to factory settings if the monitor is not operating at its original factory settings. Select RECALL using the [+] or [–] button, then press [MENU] button to reset the settings.

MAIN MENU: Returns to OSD main menu. Press [+] or [–] button to select MAIN MENU, then press [MENU] button to return to OSD Main Menu.

EXIT: Turns off the OSD. Select EXIT using the [+] or [–] button, then press [MENU] to exit the OSD.

OSD Warning

NO SIGNAL: This function gives a warning when there is no signal present. After power is turned on or when there is a change of input signal or video is inactive, the **No Signal** window will appear.

RESOLUTION NOTIFIER: This function gives a warning of use with optimized resolution. After power is turned on or when there is a change of input signal or the video signal doesn't have proper resolution, the **Resolution Notifier** window will open. This function can be disabled in the MISC Sub-menu.

OUT OF RANGE: This function gives a recommendation of the optimized resolution and refresh rate. After the power is turned on or there is a change of input signal or the video signal doesn't have proper timing, the **Out Of Range** menu will appear.

Recommended Use

Safety Precautions and Maintenance



FOR OPTIMUM PERFORMANCE, PLEASE NOTE THE FOLLOWING WHEN SETTING UP AND USING THE MULTISYNC® LCD COLOR MONITOR:



- **DO NOT OPEN THE MONITOR.** There are no user serviceable parts inside and opening or removing covers may expose you to dangerous shock hazards or other risks. Refer all servicing to qualified service personnel.
- Do not spill any liquids into the cabinet or use your monitor near water.
- Do not insert objects of any kind into the cabinet slots, as they may touch dangerous voltage points, which can be harmful or fatal or may cause electric shock, fire or equipment failure.
- Do not place any heavy objects on the power cord. Damage to the cord may cause shock or fire.
- Do not place this product on a sloping or unstable cart, stand or table, as the monitor may fall, causing serious damage to the monitor.
- When operating the MultiSync LCD monitor with its AC 125-240V power source, use a power supply cord that matches the power supply voltage of the AC power outlet being used. The power supply cord you use must have been approved by and comply with the safety standards of your country. (Type H05VV-F should be used in Europe)
- In UK, use a BS-approved power cord with molded plug having a black (5A) fuse installed for use with this monitor. If a power cord is not supplied with this monitor, please contact your supplier.
- Use supplied AC Adapter. Do not place any objects onto the AC Adapter and do not use the AC Adapter outdoors.
- Do not place any objects onto the monitor and do not use the monitor outdoors.
- The inside of the flourescent tube located within the LCD monitor contains mercury. Please follow the bylaws or rules of your municipality to dispose of the tube properly.

Immediately unplug your monitor from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the monitor.
- If the monitor has been exposed to rain or water.
- If the monitor has been dropped or the cabinet damaged.
- If the monitor does not operate normally by following operating instructions.
- Do not bend power cord.
- Do not use monitor in high temperatured, humid, dusty, or oily areas.
- If glass is broken, handle with care.
- Do not cover vent on monitor.
- If monitor or glass is broken, do not come in contact with the liquid crystal and handle with care.

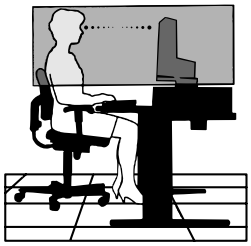


CAUTION

- Allow adequate ventilation around the monitor so that heat can properly dissipate. Do not block ventilated openings or place the monitor near a radiator or other heat sources. Do not put anything on top of monitor.
- The power cable connector is the primary means of detaching the system from the power supply. The monitor should be installed close to a power outlet which is easily accessible.
- Handle with care when transporting. Save packaging for transporting.

Recommended Use *–continued*

CORRECT PLACEMENT AND ADJUSTMENT OF THE MONITOR CAN REDUCE EYE, SHOULDER AND NECK FATIGUE. CHECK THE FOLLOWING WHEN YOU POSITION THE MONITOR:



- For optimum performance, allow 20 minutes for warm-up.
- Adjust the monitor height so that the top of the screen is at or slightly below eye level. Your eyes should look slightly downward when viewing the middle of the screen.
- Position your monitor no closer than 16 inches and no further away than 28 inches from your eyes. The optimal distance is 21 inches.
- Rest your eyes periodically by focusing on an object at least 20 feet away. Blink often.
- Position the monitor at a 90° angle to windows and other light sources to minimize glare and reflections. Adjust the monitor tilt so that ceiling lights do not reflect on your screen.
- If reflected light makes it hard for you to see your screen, use an anti-glare filter.
- Clean the LCD monitor surface with a lint-free, non-abrasive cloth. Avoid using any cleaning solution or glass cleaner!
- Adjust the monitor's brightness and contrast controls to enhance readability.
- Use a document holder placed close to the screen.
- Position whatever you are looking at most of the time (the screen or reference material) directly in front of you to minimize turning your head while you are typing.
- Avoid displaying fixed patterns on the monitor for long periods of time to avoid image persistence (after-image effects).
- Get regular eye checkups.

Ergonomics

To realize the maximum ergonomics benefits, we recommend the following:

- Adjust the Brightness until the background raster disappears
- Do not position the Contrast control to its maximum setting
- Use the preset Size and Position controls with standard signals
- Use the preset Color Setting
- Use non-interlaced signals with a vertical refresh rate between 60-75Hz
- Do not use primary color blue on a dark background, as it is difficult to see and may produce eye fatigue to insufficient contrast

For more detailed information on setting up a healthy work environment, call NEC at (800) 632-4662, NEC FastFacts™ information at (800) 366-0476 and request document #900108 or write the American National Standard for Human Factors Engineering of Visual Display Terminal Workstations – ANSI-HFS Standard No. 100-1988 – The Human Factors Society, Inc. P.O. Box 1369, Santa Monica, California 90406.

Specifications

Monitor Specifications		MultiSync® LCD1920NX™ Monitor
LCD	Size	19.0" (full 19.0" viewable diagonal area)
	Type	TFT (Thin Film Transistor), Active Matrix Panel
		0.294mm pixel pitch
	Color Filter	RGB Vertical Stripe
	Glass surface	Anti-Glare
Maximum Viewing Angles	Left/right	85°/85°
	Up/Down	85°/85°
Input Signal	Video Sync	RGB Analog (0.7/1.0 Vp-p, 75 ohms)
		DVI-D (100 ohms)
		Separate Sync, Composite Sync
		Fh: 31.5-80 kHz, Fv: 56-75 Hz
Compatibility	PC	Up to 1280 x 1024 Non-interlaced (NI)
	Macintosh®	Up to 1280 x 1024 Non-interlaced (NI)
Resolution	Primary Mode	VESA 1280 x 1024 @ 60Hz
Power	Voltage	AC 100-240V, 50/60 Hz
Connector	Input Signal	Analog: 15 pin D-sub Connector
		Digital: 24 pin DVI-D Connector
Display Area	Full screen	376.3 mm (H) x 301.1 mm (V)
Operating Conditions	Temperature	41 F to 95 F (5 °C to 35 °C)
	Humidity	10% to 80% (non-condensing)
	Altitude	to 10,000 feet (3,000m)
Storage Conditions	Temperature	14 F to +140 F (-10 °C to +60 °C)
	Humidity	10% to 85% (non-condensing)
	Altitude	to 40,000 feet (12,000m)
Dimensions	Physical	434.5 mm (W) x 205.0 mm (D) x 423.0 mm (H)
		17.1 inches (W) x 8.1 inches (D) x 16.7 inches (H)
Weight	Net	8.0 kg (17.6 lbs)
	Gross	11.0 kg (24.3 lbs)
Power State	Power On	<60W (green LED)
	Power Off	<3W (amber LED)

- All products and trademarks are brand names of their respective companies.
- Specifications are subject to change without prior notice.

Features

Reduced Footprint: Provides the ideal solution for environments requiring superior image quality but with size and weight limitations. The monitor's small footprint and low weight allow it to be moved or transported easily from one location to another.

AccuColor® Control Systems: Allows you to adjust the colors on your screen and customize the color accuracy of your monitor to a variety of standards.

OSD (On-Screen Display) Controls: Allow you to quickly and easily adjust all elements of your screen image via simple to use on-screen menus.

No-touch Auto Adjust: No-touch auto adjust automatically adjusts the monitor to optimal settings upon initial setup.

ErgoDesign® Features: Enhance human ergonomics to improve the working environment, protect the health of the user and save money. Examples include OSD controls for quick and easy image adjustments, tilt base for preferred angle of vision, small footprint and compliance with MPRII and TCO guidelines for lower emissions.

Plug and Play: The Microsoft® solution with the Windows® 95/98/Me/2000/XP operating system facilitates setup and installation by allowing the monitor to send its capabilities (such as screen size and resolutions supported) directly to your computer, automatically optimizing display performance.

IPM™ (Intelligent Power Manager) System: Provides innovative power-saving methods that allow the monitor to shift to a lower power consumption level when on but not in use, saving two-thirds of your monitor energy costs, reducing emissions and lowering the air conditioning costs of the workplace.

Multiple Frequency Technology: Automatically adjusts monitor to the display card's scanning frequency, thus displaying the resolution required.

FullScan™ Capability: Allows you to use the entire screen area in most resolutions, significantly expanding image size.

VESA Standard Mounting Interface: Allows users to connect their MultiSync® monitor to any VESA standard third party mounting arm or bracket. Allows for the monitor to be mounted on a wall or an arm using any third party compliant device.

Troubleshooting

No picture
- The signal cable should be completely connected to the display card/computer.
- The display card should be completely seated in its slot.
- Front Power Switch and computer power switch should be in the ON position.
- Check the LED of AC adapter is ON.
- Check to make sure that a supported mode has been selected on the display card or system being used. (Please consult display card or system manual to change graphics mode.)
- Check the monitor and your display card with respect to compatibility and recommended settings.
- Check the signal cable connector for bent or pushed-in pins.

Power Button does not respond
- Unplug the power cord of the monitor from the AC outlet to turn off and reset the monitor.

Image persistence
- Image persistence is when a "ghost" of an image remains on the screen even after the monitor has been turned off. Unlike CRT monitors, LCD monitors' image persistence is not permanent. To alleviate image persistence, turn the monitor off for as long as an image was displayed. If an image was on the monitor for one hour and a "ghost" of that image remains, the monitor should be turned off for one hour to erase the image.

  NOTE: As with all personal display devices, NEC-Mitsubishi Electronics Display of America recommends using a screen saver at regular intervals whenever the screen is idle.

Image is unstable, unfocused or swimming is apparent
- Signal cable should be completely attached to the computer.
- Use the OSD Image Adjust controls to focus and adjust display by increasing or decreasing the fine total. When the display mode is changed, the OSD Image Adjust settings may need to be re-adjusted.
- Check the monitor and your display card with respect to compatibility and recommended signal timings.
- If your text is garbled, change the video mode to non-interlace and use 60Hz refresh rate.

LED on monitor is not lit (no green or amber color can be seen)
- Power Switch should be in the ON position and power cord should be connected.
- Check the LED of AC adapter is ON.
- Make certain the computer is not in a power-saving mode (touch the keyboard or mouse).

Display image is not sized properly
- Use the OSD Image Adjust controls to increase or decrease the Coarse total.
- Check to make sure that a supported mode has been selected on the display card or system being used. (Please consult display card or system manual to change graphics mode.)

Selected resolution is not displayed properly
- Use OSD Display Mode to enter Information menu and confirm that the appropriate resolution has been selected. If not, select corresponding option.

References

- **BBS** **(978) 742-8706**

  NEC-Mitsubishi Electronics Display of America Remote Bulletin Board System is an electronic service accessible with your system and a modem. Communication parameters are: 300/1200/2400/9600/14.4k/28.8k/33.6k bps, no parity, 8-data bits, 1 stop bit

- **Customer Service/**
  Technical Support **(800) 632-4662**
  Fax **(978) 742-7049**

- **Electronic Channels:**

Internet e-mail:	tech-support@necmitsubishi.com
Internet ftp site:	ftp.necmitsubishi.com
World Wide Web:	http://www.necmitsubishi.com
Product Registration:	http://www.necmitsubishi.com/productregistration
European Operations:	http://www.nec-mitsubishi.com
Windows® 95/98/Me/2000/XP INF File:	http://support.necmitsubishi.com/software.htm then download the file NECMSINF.ZIP

- **FastFacts™ Information** **(800) 366-0476**

INFORMATION	DESCRIPTION	DOCUMENT #
Glossary	Definition of terms related to functions, features and installation of the MultiSync® monitor	900203
More Information	Names and addresses of other groups involved in standards and features of the MultiSync monitor	900204
Macintosh Connection	Detailed information on connecting the MultiSync monitor to a Macintosh	153006
Healthy Work Environment	Detailed information on setting up a healthy work environment	900108

- **Literature & Sales Info** **(800) NEC-INFO [(800) 632-4636]**
- **MultiSync Fulfillment** **(800) 632-4662**
  [For software & accessories]
- **TeleSales** **(800) 284-4484**

Limited Warranty

NEC-Mitsubishi Electronics Display of America, Inc. (hereinafter "NMD-A") warrants this Product to be free from defects in material and workmanship and, subject to the conditions set forth below, agrees to repair or replace (at NMD-A's sole option) any part of the enclosed unit which proves defective for a period of three (3) years from the date of first consumer purchase. Spare parts are warranted for ninety (90) days. Replacement parts or unit may be new or refurbished and will meet specifications of the original parts or unit.

This warranty gives you specific legal rights and you may also have other rights, which vary from state to state. This warranty is limited to the original purchaser of the Product and is not transferable. This warranty covers only NMD-A-supplied components. Service required as a result of third party components is not covered under this warranty. In order to be covered under this warranty, the Product must have been purchased in the U.S.A. or Canada by the original purchaser. This warranty only covers Product distribution in the U.S.A. or Canada by NMD-A No warranty service is provided outside of the U.S.A. or Canada. Proof of Purchase will be required by NMD-A to substantiate date of purchase. Such proof of purchase must be an original bill of sale or receipt containing name and address of seller, purchaser, and the serial number of the product.

It shall be your obligation and expense to have the Product shipped, freight prepaid, or delivered to the authorized reseller from whom it was purchased or other facility authorized by NMD-A to render the services provided hereunder in either the original package or a similar package affording an equal degree of protection. All Products returned to NMD-A for service MUST have prior approval, which may be obtained by calling 1-800-632-4662. The Product shall not have been previously altered, repaired, or serviced by anyone other than a service facility authorized by NMD-A to render such service, the serial number of the product shall not have been altered or removed. In order to be covered by this warranty the Product shall not have been subjected to displaying of fixed images for long periods of time resulting in image persistence (afterimage effects), accident, misuse or abuse or operated contrary to the instructions contained in the User's Manual. Any such conditions will void this warranty.

NMD-A SHALL NOT BE LIABLE FOR DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, OR OTHER TYPES OF DAMAGES RESULTING FROM THE USE OF ANY NMD-A PRODUCT OTHER THAN THE LIABILITY STATED ABOVE. THESE WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SOME STATES DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES OR THE LIMITATION OR EXCLUSION OF LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES SO THE ABOVE EXCLUSIONS OR LIMITATIONS MAY NOT APPLY TO YOU.

This Product is warranted in accordance with the terms of this limited warranty. Consumers are cautioned that Product performance is affected by system configuration, software, the application, customer data, and operator control of the system, among other factors. While NMD-A Products are considered to be compatible with many systems, specific functional implementation by the customers of the Product may vary. Therefore, suitability of a Product for a specific purpose or application must be determined by consumer and is not warranted by NMD-A.

For the name of your nearest authorized NEC-Mitsubishi Electronics Display service facility, contact NEC-Mitsubishi Electronics Display of America at 1-800-632-4662.

TCO'95

MultiSync LCD1920NX (L19GC061) Black Model

Congratulations! You have just purchased a TCO'95 approved and labeled product! Your choice has provided you with a product developed for professional use. Your purchase has also contributed to reducing the burden on the environment and also, to the further development of environmentally adapted electronics products.

Why do we have environmentally labelled computers?

In many countries, environmental labelling has become an established method for encouraging the adaptation of goods and services to the environment. The main problem, as far as computers and other electronics equipment are concerned, is that environmentally harmful substances are used both in the products and during the manufacturing. Since it has not been possible for the majority of electronics equipment to be recycled in a satisfactory way, most of these potentially damaging substances sooner or later enter Nature.

There are also other characteristics of a computer, such as energy consumption levels, that are important from the viewpoints of both the work (Internal) and natural (external) environments. Since all methods of conventional electricity generation have a negative effect on the environment (acidic and climate-influencing emissions, radioactive waste, etc.), it is vital to conserve energy. Electronics equipment in offices consume an enormous amount of energy since they are often left running continuously.

What does labelling involve?

This product meets the requirements for the TCO'95 scheme which provides for international and environmental labelling of personal computers. The labelling scheme was developed as a joint effort by the TCO (The Swedish Confederation of Professional Employees), Naturskyddsforeningen (The Swedish Society for Nature Conservation) and NUTEK (The National Board for Industrial and Technical Development in Sweden).

The requirements cover a wide range of issues: environment, ergonomics, usability, emission of electrical and magnetic fields, energy consumption and electrical and fire safety.

The environmental demands concern restrictions on the presence and use of heavy metals, brominated and chlorinated flame retardants, CFCs (freons) and chlorinated solvents, among other things. The product must be prepared for recycling and the manufacturer is obliged to have an environmental plan which must be adhered to in each country where the company implements its operational policy. The energy requirements include a demand that the computer and/or display, after a certain period of inactivity, shall reduce its power consumption to a lower level in one or more stages. The length of time to reactivate the computer shall be reasonable for the user.

Labelled products must meet strict environmental demands, for example, in respect of the reduction of electric and magnetic fields, physical and visual ergonomics and good usability.

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Environmental Requirements

Brominated flame retardants

Brominated flame retardants are present in printed circuit boards, cables, wires, casings and housings. In turn, they delay the spread of fire. Up to thirty percent of the plastic in a computer casing can consist of flame retardant substances. These are related to another group of environmental toxins, PCBs, which are suspected to give rise to similar harm, including

TCO'95 *–continued*

reproductive damage in fisheating birds and mammals, due to the bio-accumulative* processes. Flame retardants have been found in human blood and researchers fear that disturbances in foetus development may occur.

TCO'95 demand requires that plastic components weighing more than 25 grams must not contain organically bound chlorine and bromine.

Lead**

Lead can be found in picture tubes, display screens, solders and capacitors. Lead damages the nervous system and in higher doses, causes lead poisoning.

TCO'95 requirement permits the inclusion of lead since no replacement has yet been developed.

Cadmium**

Cadmium is present in rechargeable batteries and in the colourgenerating layers of certain computer displays. Cadmium damages the nervous system and is toxic in high doses.

TCO'95 requirement states that batteries may not contain more than 25 ppm (parts per million) of cadmium. The colourgenerating layers of display screens must not contain any cadmium.

Mercury**

Mercury is sometimes found in batteries, relays, switches, and back-light systems, Mercury damages the nervous system and is toxic in high doses.

TCO'95 requirement states that batteries may not contain more than 25 ppm (parts per million) of mercury. It also demands that no mercury is present in any of the electrical or electronics components concerned with the display unit, except the back-light system.

CFCs (freons)

CFCs (freons) are sometimes used for washing printed circuit boards and in the manufacturing of expanded foam for packaging. CFCs break down ozone and thereby damage the ozone layer in the stratosphere, causing increased reception on Earth of ultraviolet light with consequent increased risks of skin cancer (malignant melanoma).

The relevant TCO'95 requirement; Neither CFCs nor HCFCs may be used during the manufacturing of the product or its packaging.

*Bio-accumulative is defined as substances which accumulate within living organisms.

**Lead, Cadmium and Mercury are heavy metals which are Bio-accumulative.

To obtain complete information on the environmental criteria document, order from:

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SWEDEN
FAX Number: +46 8 782 92 07
E-mail (Internet): development@tco.se

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TCO'99

MultiSync LCD1920NX (L19GC061) White Model

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In many countries, environmental labelling has become an established method for encouraging the adaptation of goods and services to the environment. The main problem, as far as computers and other electronics equipment are concerned, is that environmentally harmful substances are used both in the products and during the manufacturing. Since it has not been possible for the majority of electronics equipment to be recycled in a satisfactory way, most of these potentially damaging substances sooner or later enter Nature.

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The requirements cover a wide range of issues: environment, ergonomics, usability, emission of electrical and magnetic fields, energy consumption and electrical and fire safety.

The environmental demands concern restrictions on the presence and use of heavy metals, brominated and chlorinated flame retardants, CFCs (freons) and chlorinated solvents, among other things. The product must be prepared for recycling and the manufacturer is obliged to have an environmental plan which must be adhered to in each country where the company implements its operational policy. The energy requirements include a demand that the computer and/or display, after a certain period of inactivity, shall reduce its power consumption to a lower level in one or more stages. The length of time to reactivate the computer shall be reasonable for the user.

Labelled products must meet strict environmental demands, for example, in respect of the reduction of electric and magnetic fields, physical and visual ergonomics and good usability.

Environmental Requirements

Flame retardants

Flame retardants are present in printed circuit boards, cables, wires, casings and housings. In turn, they delay the spread of fire. Up to thirty percent of the plastic in a computer casing can consist of flame retardant substances. Most flame retardants contain bromine or chloride and these are related to another group of environmental toxins, PCBs, which are suspected to give rise to severe health effects, including reproductive damage in fisheating birds and mammals, due to the bio-

TCO'99 *–continued*

accumulative* processes. Flame retardants have been found in human blood and researchers fear that disturbances in foetus development may occur.

TCO'99 demand requires that plastic components weighing more than 25 grams must not contain flame retardants with organically bound chlorine and bromine. Flame retardants are allowed in the printed circuit boards since no substitutes are available.

Lead**

Lead can be found in picture tubes, display screens, solders and capacitors. Lead damages the nervous system and in higher doses, causes lead poisoning.

TCO'99 requirement permits the inclusion of lead since no replacement has yet been developed.

Cadmium**

Cadmium is present in rechargeable batteries and in the colourgenerating layers of certain computer displays. Cadmium damages the nervous system and is toxic in high doses.

TCO'99 requirement states that batteries, the colourgenerating layers of display screens and the electrical or electronics components must not contain any cadmium.

Mercury**

Mercury is sometimes found in batteries, relays and switches, Mercury damages the nervous system and is toxic in high doses.

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Declaration of the Manufacturer

We hereby certify that the color monitor
MultiSync® LCD1920NX (L19GC061)
is in compliance with
Council Directive 73/23/EEC:
– EN 60950

Council Directive 89/336/EEC:
– EN 55022
– EN 61000-3-2
– EN 61000-3-3
– EN 55024

and marked with

CE

NEC-Mitsubishi Electric Visual
Systems Corporation
4-13-23, Shibaura,
Minato-Ku
Tokyo 108-0023, Japan

MultiSync LCD1920NX

User's Manual

Uživatelská příručka

Bedienerhandbuch

Οδηγίες Χρήσης

Manual del usuario

Manuel Utilisateur

Manuale utente

Gebruikershandleiding

Podręcznik użytkownika

Руководство пользователя

Kullanıcı Klavuzu

NEC

Canadian Department of Communications Compliance Statement

DOC: This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

C-UL: Bears the C-UL Mark and is in compliance with Canadian Safety Regulations according to CAN/CSA C22.2 No. 950.

FCC Information

1. Use the attached specified cables with the MultiSync LCD1920NX (L19GC061) color monitor so as not to interfere with radio and television reception.
   (1) Please use the supplied power cord or equivalent to ensure FCC compliance.
   (2) Please use the supplied AC Adapter.
   (3) Please use the supplied shielded video signal cable.
   Use of other cables and adapters may cause interference with radio and television reception.
2. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
   - Reorient or relocate the receiving antenna.
   - Increase the separation between the equipment and receiver.
   - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
   - Consult your dealer or an experienced radio/TV technician for help.

If necessary, the user should contact the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet, prepared by the Federal Communications Commission, helpful: “How to Identify and Resolve Radio-TV Interference Problems.” This booklet is available from the U.S. Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

DECLARATION OF CONFORMITY

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions. (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

U.S. Responsible Party:	**NEC-Mitsubishi Electronics Display of America, Inc.**
Address:	**1250 North Arlington Heights Road, Suite 500 Itasca, Illinois 60143-1248**
Tel. No.:	**(630) 467-3000**
Type of Product:	Computer Monitor
Equipment Classification:	Class B Peripheral
Model:	MultiSync LCD1920NX

FC

We hereby declare that the equipment specified above conforms to the technical standards as specified in the FCC Rules.

Windows is a registered trademark of Microsoft Corporation. NEC is a registered trademark of NEC Corporation. ENERGY STAR is a U.S. registered trademark. All other brands and product names are trademarks or registered trademarks of their respective owners.

As an ENERGY STAR® Partner, NEC-Mitsubishi Electronics Display of America has determined that this product meets the Energy Star guidelenes for energy efficiency. The ENERGY STAR emblem does not represent EPA endorsement of any product or service.

TCO’95

MultiSync LCD1920NX Black Model

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Brominated flame retardants

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TCO’95 demand requires that plastic components weighing more than 25 grams must not contain organically bound chlorine and bromine.

Lead**

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TCO’99

MultiSync LCD1920NX White Model

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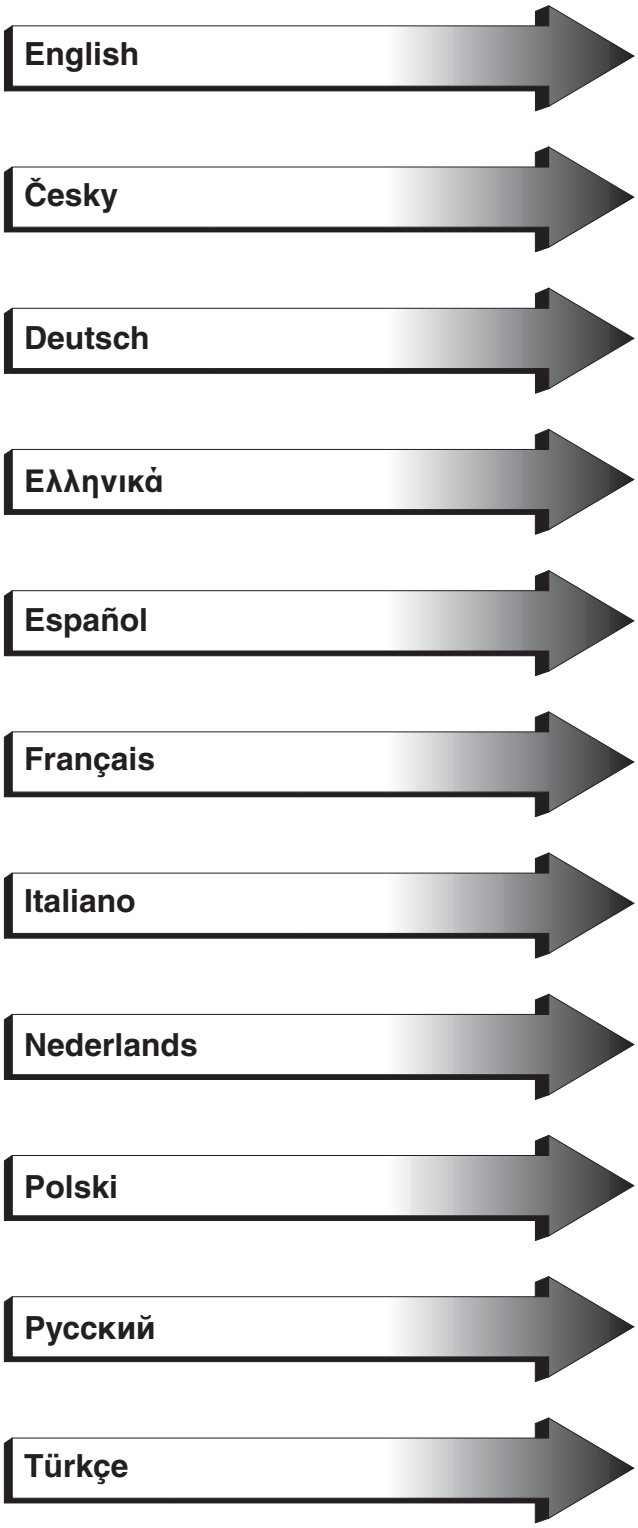
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Polski
Русский
Türkçe

WARNING

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO, DO NOT USE THIS UNIT'S POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS UNLESS THE PRONGS CAN BE FULLY INSERTED.

REFRAIN FROM OPENING THE CABINET AS THERE ARE HIGH VOLTAGE COMPONENTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

CAUTION

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, MAKE SURE POWER CORD IS UNPLUGGED FROM WALL SOCKET. TO FULLY DISENGAGE THE POWER TO THE UNIT, PLEASE DISCONNECT THE POWER CORD FROM THE AC OUTLET. DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol warns user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

Declaration

Declaration of the Manufacturer

We hereby certify that the colour monitor
MultiSync LCD1920NX
is in compliance with

Council Directive 73/23/EEC:
- EN 60950

Council Directive 89/336/EEC:
- EN 55022
- EN 61000-3-2
- EN 61000-3-3
- EN 55024

and marked with

CE

NEC-Mitsubishi Electric Visual
Systems Corporation
4-13-23, Shibaura,
Minato-Ku
Tokyo 108-0023, Japan

Getting Started

Congratulations on your purchase of this TFT LCD Monitor.

Please read this section carefully to get instant understanding of this product and its correct operations.

Important! Please keep the original carton and all packing materials for future shipping needs.

Package Contents

Your TFT LCD Monitor package includes the following items:

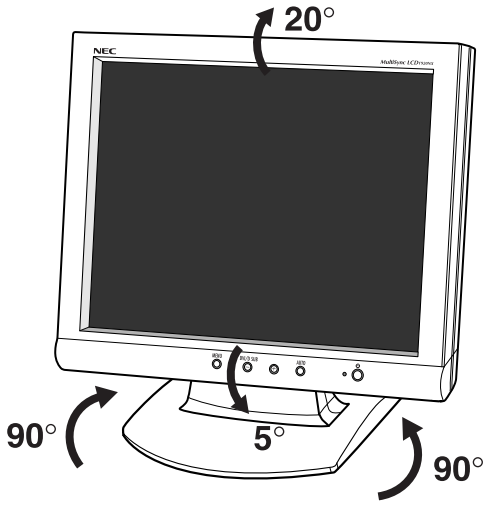
- 19" TFT LCD Colour Monitor
- Signal cable with 15 pin D-Sub connector
- AC Adapter
- Power cord
- User's Manual
- CD-ROM

Unique Features

- 8-bit panel, supporting 16.7M true colours.
- High brightness & high contrast, providing more vivid images.
- Built-in both analog and digital interfaces.
- TCO'99 and TCO'95 approved.
- Composite sync and compatibility.
- Five languages in OSD (On Screen Display).
- 9-stage smoothing function.
- Supports 19 sets of factory preset modes and 32 sets of user's automatically saved modes.
- Wide Viewing Angle.

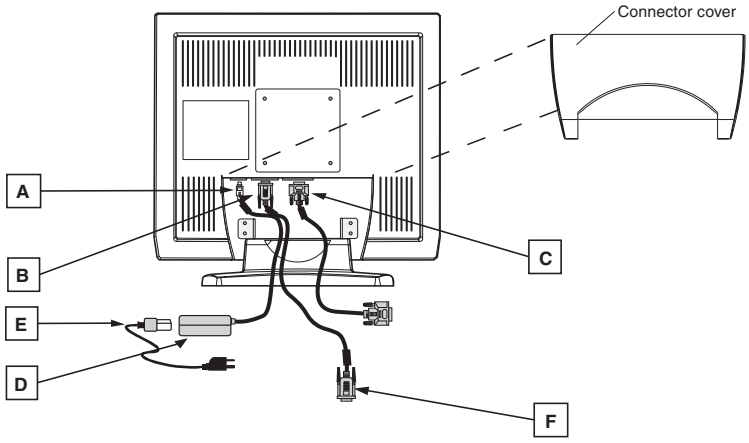
Adjusting the Monitor

Press down on the stand and gently adjust the monitor to a suitable viewing angle (see Figure below). Please note that this monitor can only be tilted forward to 5 degrees, backward to 20 degrees, and swiveled 90 degrees left/right. To prevent damage to the monitor, do not press the screen over its tolerant angles.



Quick Installation

- Make sure the computer is turned off.
- Attach the female end of the power cord (**Indication E**) to the AC adapter (**Indication D**), then plug the AC adapter connector to the power “DC-IN (**Indication A**)” jack of the LCD monitor.
- When using a power cord, plug the male end into the wall socket.
- Plug one end of the 15 pin D-Sub signal cable (**Indication F**) in the “D-SUB” video signal connector (**Indication B**) of LCD monitor. If you use digital signal, plug one end of the 24 pin DVI-D signal cable (**Indication G**) in the “DVI-D” video signal connector (**Indication C**) of LCD monitor.
- Turn on the computer.
- Turn on the LCD monitor.
- Before your operations of the monitor, please refer to P.6 “Operations” first.



A. DC In
B. D-SUB
C. DVI-D
D. AC Adapter
E. Power Cord
F. D-Sub Signal Cable

NOTE : When operating this LCD monitor with an AC125-240V power source, please refer to “Recommended Use” for proper power code selection. Use supplied AC Adapter.

Quick Installation - *continued*

Remove Monitor Stand for Mounting

To prepare the monitor for alternate mounting purposes:

1. Disconnect all cables.
2. Place monitor face down on a non-abrasive surface (**Figure R.1**).
3. Remove the 4 screws connecting the monitor to the stand and lift off the stand assembly (**Figure R.1**).The monitor is now ready for mounting in an alternate manner.
4. Connect the AC cord and signal cable to the back of the monitor.
5. Reverse this process to reattach stand.

NOTE: Use only VESA-compatible alternative mounting method.

6. This LCD monitor is designed for use with a flexible arm.

   Please use the attached screws (4pcs) as shown in the picture when installing.

   To meet the safety requirements, the monitor must be mounted to an arm which guaranties the necessary stability under consideration of the weight of the monitor.

   The LCD monitor shall only be used with an approved arm (e.g. GS mark).

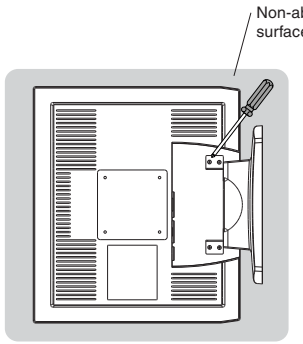
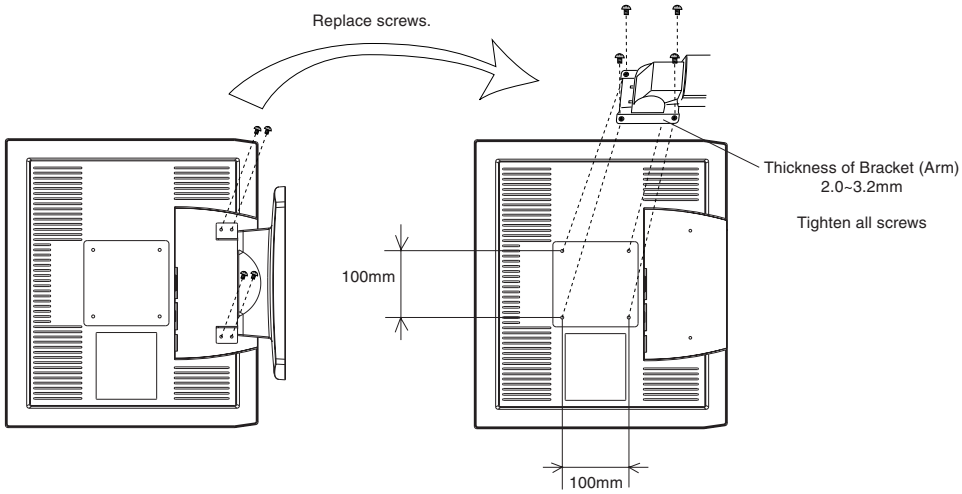
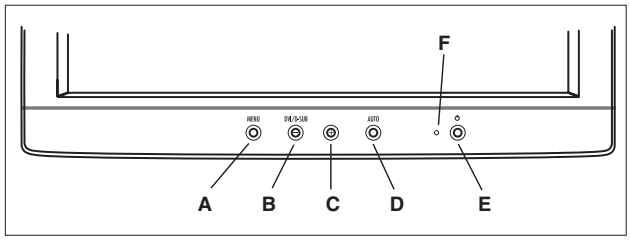


Figure R.1



Operations

Push the power button (**Indication E**) on the front of the LCD monitor to turn it on. When the power light (**Indication F**) turns green, the LCD is ready to use. Push the power switch button to turn off.



Function Keys

A. MENU	1. Press this button to turn on the OSD (On Screen Display) main menu.
	2. Press this button to activate selected items.
	3. Press this button 2 seconds or more to turn off the main menu.
B. [–]	1. To scroll down the menu.
	2. To decrease the value of selected item.
C. [+]	1. To scroll up the menu.
	2. To increase the value of selected item.
D. AUTO	Press this button to activate “AUTO SYNC” function.
E. Power switch	Press this button to turn on/off the monitor.
F. Power LED	When the light is green, the power is on; amber light is when the power is off or in power saving mode.

Hot Keys

- **Auto-Sync:** Press the [AUTO] button to activate Auto-Sync under any circumstances.
- **Auto-Contrast:** Press the [+] button to activate the Auto-Contrast adjustment.
- **Change Signal Input:** Press the [–] button to change the signal input, “DVI” or “D-SUB”.

OSD Main Menu

For screen adjustments, press the [MENU] button to display the OSD (On-Screen Display) Main Menu shown below. Press the [+] or [–] button to scroll up or down the menu to your required options. Please note that the OSD will automatically turn off in 30 seconds without any manipulation or by simply pressing the [MENU] button for 2 seconds.

CONTRAST: Adjusting the contrast level of the screen image. Under Main Menu, select CONTRAST using the [+] or [–] button, then press [MENU] button to activate the function. Press the [+] button to increase contrast, [–] button to decrease contrast shown below. Press [MENU] to return to Main Menu.

AUTO-CONTRAST: Automatically adjusts the contrast level of the screen image. Press [+] or [–] button to select AUTO CONTRAST, then press [MENU] button to activate AUTO CONTRAST.

VIDEO ANALOG/DIGITAL: Switching between analog and digital input signal. Press [+] or [–] button to select VIDEO ANALOG or VIDEO DIGITAL, then press [MENU] button to switch.

BRIGHTNESS: Adjusts the brightness level of the screen image. Under the Main Menu, select BRIGHTNESS using [+] or [–] button, then press [MENU] button to activate the function. Press the [+] button to increase the brightness, [–] button to decrease the brightness. Press [MENU] to return to Main Menu.

COLOUR Sub-Menu:

• Under the Main Menu, select COLOUR using the [+] or [–] button, then press [MENU] button to activate the COLOUR Sub-Menu.

• Under the COLOUR Sub-Menu, press [+] or [–] button to scroll up or down to your desired preset colour mode. Then press [MENU] to activate the mode.

• Or you may choose user's mode by adjusting R, G, B respectively. Press the [+] or [–] button select R or G or B bar, then press [MENU] to activate the adjustment. Press the [+] or [–] button to adjust the values, then press [MENU] button to save the value and return to colour Sub-Menu to adjust another colour. After adjusting R, G, B colours, press [MENU] to return to Main Menu.

MENU **MAIN MENU:** Returning to OSD main menu. Press [+] or [–] button to select MAIN MENU, then press [MENU] button to return to OSD Main Menu.

LCD ADJUST Sub-Menu (Analog input only): Under the Main Menu, select LCD ADJUST using the [+] or [–] button, then press [MENU] button to enter LCD ADJUST Sub-Menu.

PC/MAC: Switching between PC at 800 X 600 resolution and MAC at 832 X 624 resolution, using [+] or [–] button. Then press [MENU] to initiate the switch between PC and MAC shown as above.

H SIZE: Adjusting the width of the screen image. Select H-SIZE, using [+] or [–] button, then press [MENU] button to activate thefunction. Press [+] button to increase the width of the screen image, press [–] button to decrease the width of the screen image shown below. Press [MENU] to return to LCD ADJUST Sub-Menu.

H - POSITION: Moving the screen image to the right or left. Select H - POSITION using the [+] or [–] button, then press the [MENU] button to activate the function. Press [+] button to move the screen to the right, [–] button to move to the left. Press [MENU] to return to LCD ADJUST Sub-Menu.

V - POSITION: Moving the screen image up or down. Select V - POSITION using the [+] or [–] button, then press [MENU] to activate the function. Press [+] button to move the screen image up, [–] button to move down. Press [MENU] to return to LCD ADJUST Sub-Menu.

FINE TUNE: Aligning the performance slightly. Select FINE TUNE using the [+] or [–] button, then press [MENU] button to activate the function. Press [+] or [–] button until the screen image looks crisp, sharp and focused. Press [MENU] to return to LCD ADJUST Sub-Menu.

AUTO-SYNC: Automatically adjusts the image to the best performance. Press [+] or [–] button to select AUTO SYNC, then press [MENU] button to activate AUTO SYNC.

NOTE: **• When setting up this monitor for the first time, perform AUTO-SYNC before use.**
• To perform AUTO-SYNC, first display an image that makes the entire screen very bright.

MENU **MAIN MENU:** Returning to OSD main menu. Press [+] or [–] button to select MAIN MENU, then press [MENU] button to return to OSD Main Menu.

LANGUAGE: Selecting preferred language used in the OSD menus. Under Main Menu, scroll to Language using [+] or [–] button, then press [MENU] button to activate the function. Press [+] or [–] button to choose preferred Language, then press [MENU] to return to Main Menu.

MAIN MENU: Returning to OSD main menu. Press [+] or [–] button to select MAIN MENU, then press [MENU] button to return to OSD Main Menu.

MISC Sub-Menu

Under the Main Menu, select MISC using the [+] or [–] button, then press [MENU] button to enter MISC Sub-Menu.

RESOLUTION NOTIFIER: This optimal resolution is 1280 x 1024. If ON is selected, a message will appear on the screen after 30 seconds, notifying you that the resolution is not at 1280 x 1024.

H-OSD POSITION: Moving the OSD position on the screen to the right or left. Select H-OSD POSITION using [+] or [–] button, then press [MENU] button to activate the function. Press the [+] button to move the OSD position to the right, [–] button to move left. Then press [MENU] to return to MISC Sub-Menu.

V-OSD POSITION: Moving the OSD position on the screen up or down. Select V-OSD POSITION using [+] or [–] button, then press [MENU] button to activate the function. Press the [+] button to move the OSD position up, [–] button to move down. Then press [MENU] to return to MISC Sub-Menu.

SMOOTHING: Making the displayed texts smooth. Select SMOOTHING using [+] or [–] button, then press [MENU] button to activate the function. Press [+] or [–] button and adjust to your liking. Press [MENU] button to return to MISC Sub-Menu.

INVISIBLE: Activating the OSD background to be invisible. Select INVISIBLE using the [+] or [–] button, then press [MENU] button to select either On or Off option.

INFORMATION: Displaying the timing mode (video signal input) coming from the graphics card in the computer. Select INFORMATION using the [+] or [–] button, then press [MENU] to display the mode. Then press [MENU] button to return to MISC Sub-Menu.

RECALL: Returning the adjustments back to factory settings if the monitor is not operating at its original factory settings. Select RECALL using the [+ or [–] button, then press [MENU] button to reset the settings.

MAIN MENU: Returning to OSD main menu. Press [+] or [–] button to select MAIN MENU, then press [MENU] button to return to OSD Main Menu.

EXIT: Turning off the OSD. Select EXIT using the [+] or [–] button, then press [MENU] to exit the OSD.

OSD Warning

NO SIGNAL: This function gives a warning when there is no signal present. After power is turned on or when there is a change of input signal or video is inactive, the **No Signal** window will appear.

RESOLUTION NOTIFIER: This function gives a warning of use with optimized resolution. After power is turned on or when there is a change of input signal or the video signal doesn't have proper resolution, the **Resolution Notifier** window will open. This function can be disabled in the MISC Sub-Menu.

OUT OF RANGE: This function gives a recommendation of the optimized resolution and refresh rate. After the power is turned on or there is a change of input signal or the video signal doesn't have proper timing, the **Out Of Range** menu will appear.

Recommended Use

Safety Precautions and Maintenance

FOR OPTIMUM PERFORMANCE, PLEASE NOTE THE FOLLOWING WHEN SETTING UP AND USING THE MULTISYNC LCD COLOR MONITOR:

- **DO NOT OPEN THE MONITOR.** There are no user serviceable parts inside and opening or removing covers may expose you to dangerous shock hazards or other risks. Refer all servicing to qualified service personnel.
- Do not spill any liquids into the cabinet or use your monitor near water.
- Do not insert objects of any kind into the cabinet slots, as they may touch dangerous voltage points, which can be harmful or fatal or may cause electric shock, fire or equipment failure.
- Do not place any heavy objects on the power cord. Damage to the cord may cause shock or fire.
- Do not place this product on a sloping or unstable cart, stand or table, as the monitor may fall, causing serious damage to the monitor.
- The power supply cord you use must have been approved by and comply with the safety standards of your country. (Type H05VV-F should be used in Europe), and matches the power supply voltage of the AC outlet being used.
- In UK, use a BS-approved power cord with molded plug having a black (5A) fuse installed for use with this monitor. If a power cord is not supplied with this monitor, please contact your supplier.

  Note: Use the supplied AC power cord. If it does not match the shape and the voltage of AC power outlet being used, please refer to the Recommended Use section for proper use of the AC power cord.
- Use supplied AC Adapter. Do not place any objects onto the AC Adapter and do not use the AC Adapter outdoors.
- Do not place any objects onto the monitor and do not use the monitor outdoors.
- The inside of the flourescent tube located within the LCD monitor contains mercury. Please follow the bylaws or rules of your municipality to dispose of the tube properly.

Immediately unplug your monitor from the wall outlet and refer servicing to qualified service personnel under the following conditions:

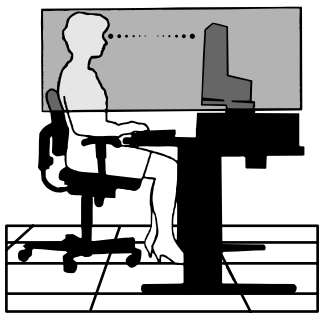
- When the power supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the monitor.
- If the monitor has been exposed to rain or water.
- If the monitor has been dropped or the cabinet damaged.
- If the monitor does not operate normally by following operating instructions.
- Do not bend power cord.
- Do not use monitor in high temperatured, humid, dusty, or oily areas.
- If glass is broken, handle with care.
- Do not cover vent on monitor.
- If monitor or glass is broken, do not come in contact with the liquid crystal and handle with care.

CAUTION

- Allow adequate ventilation around the monitor so that heat can properly dissipate. Do not block ventilated openings or place the monitor near a radiator or other heat sources. Do not put anything on top of monitor.
- The power cable connector is the primary means of detaching the system from the power supply. The monitor should be installed close to a power outlet which is easily accessible.
- Handle with care when transporting. Save packaging for transporting.

CORRECT PLACEMENT AND ADJUSTMENT OF THE MONITOR CAN REDUCE EYE, SHOULDER AND NECK FATIGUE. CHECK THE FOLLOWING WHEN YOU POSITION THE MONITOR:

- For optimum performance, allow 20 minutes for warm-up.
- Adjust the monitor height so that the top of the screen is at or slightly below eye level. Your eyes should look slightly downward when viewing the middle of the screen.
- Position your monitor no closer than 16 inches and no further away than 28 inches from your eyes. The optimal distance is 23 inches.
- Rest your eyes periodically by focusing on an object at least 20 feet away. Blink often.
- Position the monitor at a 90° angle to windows and other light sources to minimize glare and reflections. Adjust the monitor tilt so that ceiling lights do not reflect on your screen.



- If reflected light makes it hard for you to see your screen, use an anti-glare filter.
- Clean the LCD monitor surface with a lint-free, non-abrasive cloth. Avoid using any cleaning solution or glass cleaner!
- Adjust the monitor's brightness and contrast controls to enhance readability.
- Use a document holder placed close to the screen.
- Position whatever you are looking at most of the time (the screen or reference material) directly in front of you to minimize turning your head while you are typing.
- Avoid displaying fixed patterns on the monitor for long periods of time to avoid image persistence (after-image effects).
- Get regular eye checkups.

Ergonomics

To realize the maximum ergonomics benefits, we recommend the following:

- Use the preset Size and Position controls with standard signals
- Use the preset Colour Setting
- Use non-interlaced signals with a vertical refresh rate between 60-75 Hz
- Do not use primary colour blue on a dark background, as it is difficult to see and may produce eye fatigue to insufficient contrast

Troubleshooting

No picture

- The signal cable should be completely connected to the display card/computer.
- The display card should be completely seated in its slot.
- Front Power Switch and computer power switch should be in the ON position.
- Check the LED of AC adapter is ON.
- Check to make sure that a supported mode has been selected on the display card or system being used. (Please consult display card or system manual to change graphics mode.)
- Check the monitor and your display card with respect to compatibility and recommended settings.
- Check the signal cable connector for bent or pushed-in pins.

Power Button does not respond

- Unplug the power cord of the monitor from the AC outlet to turn off and reset the monitor.

Image persistence

- Image persistence is when a “ghost” of an image remains on the screen even after the monitor has been turned off. Unlike CRT monitors, LCD monitors’ image persistence is not permanent. To alleviate image persistence, turn the monitor off for as long as an image was displayed. If an image was on the monitor for one hour and a “ghost” of that image remains, the monitor should be turned off for one hour to erase the image.

  NOTE: As with all personal display devices, NEC-Mitsubishi Electronics Display recommends using a screen saver at regular intervals whenever the screen is idle.

Image is unstable, unfocused or swimming is apparent

- Signal cable should be completely attached to the computer.
- Use the OSD Image Adjust controls to focus and adjust display by increasing or decreasing the fine total. When the display mode is changed, the OSD Image Adjust settings may need to be re-adjusted.
- Check the monitor and your display card with respect to compatibility and recommended signal timings.
- If your text is garbled, change the video mode to non-interlace and use 60Hz refresh rate.

LED on monitor is not lit (no green or amber colour can be seen)

- Power Switch should be in the ON position and power cord should be connected.
- Check the LED of AC adapter is ON.
- Make certain the computer is not in a power-saving mode (touch the keyboard or mouse).

Display image is not sized properly

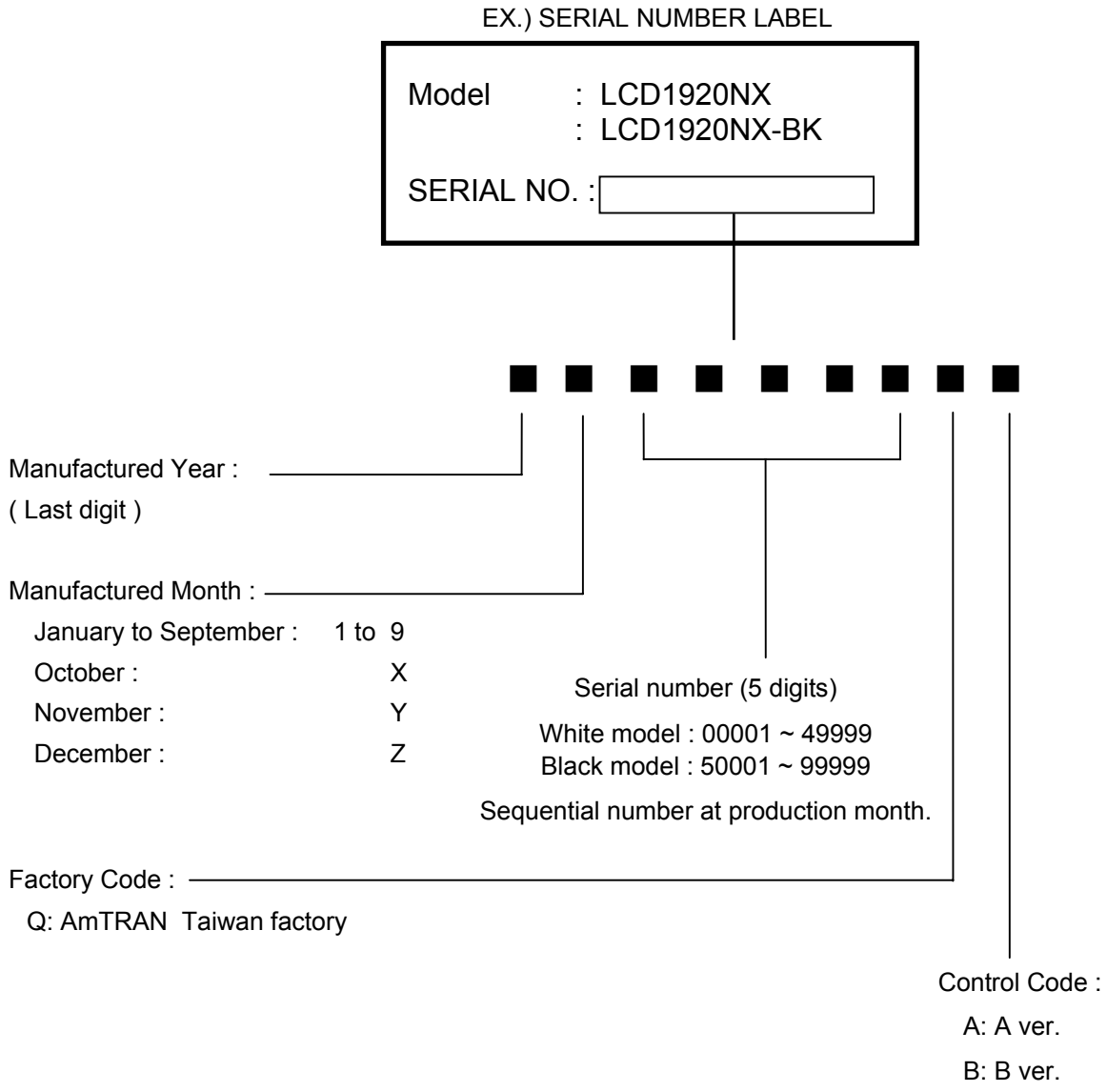
- Use the OSD Image Adjust controls to increase or decrease the Coarse total.
- Check to make sure that a supported mode has been selected on the display card or system being used. (Please consult display card or system manual to change graphics mode.)

Selected resolution is not displayed properly

- Use OSD Display Mode to enter Information menu and confirm that the appropriate resolution has been selected. If not, select corresponding option.

Serial Number Information

Refer to the serial number information shown below.



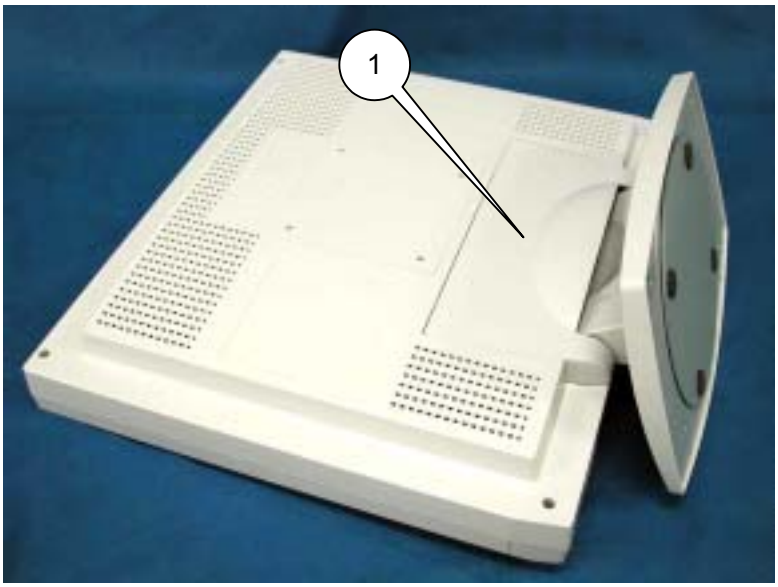
DISASSEMBLY

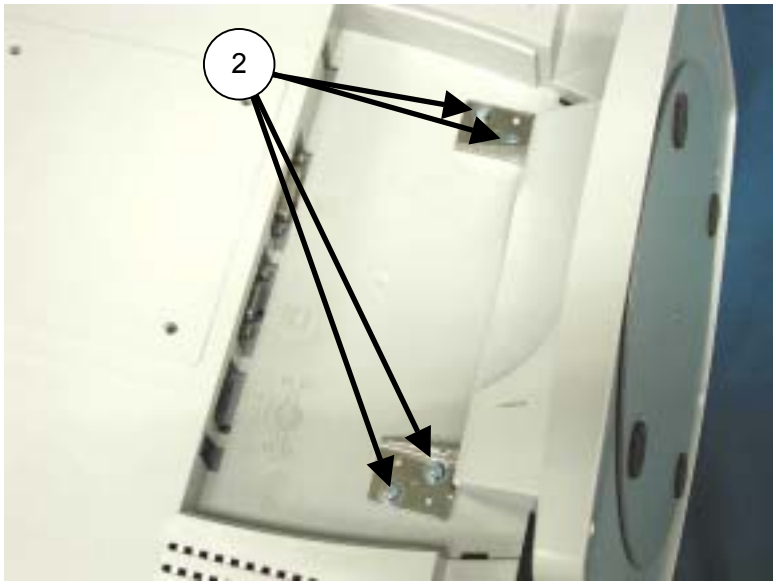
■ Before you disassemble the set, turn off power and pull out the power plug.

■ Use the proper screwdriver. If oversize or undersize screwdriver is used, screws may be damaged.

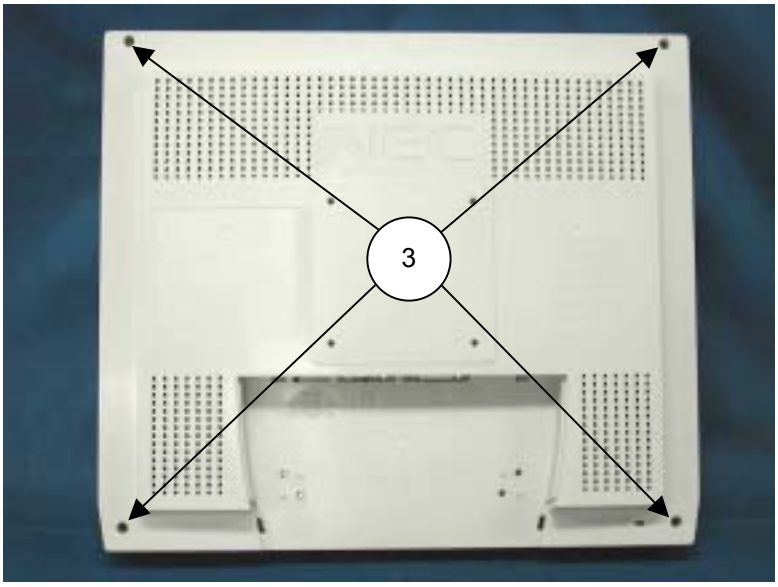
■ Assembly is the opposite process of disassembly.

SYMBOL	CODE	DESCRIPTION	COLOR
1	79PZ0164	HINGE COVER LCD1920NX	White
1	79PZ0010	HINGE COVER LCD1920NX (	Black
2	---	MAC. SCREW-MPSWF M4.0*10.0L,ZN	

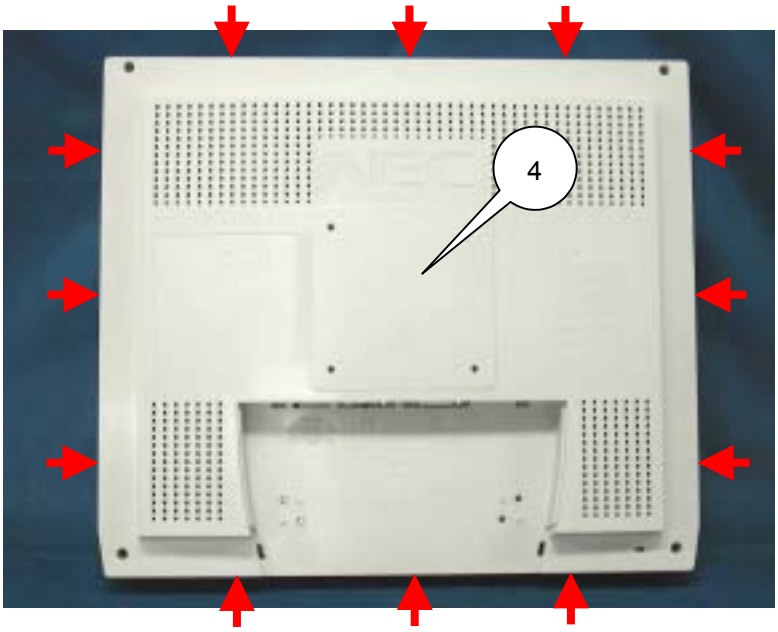




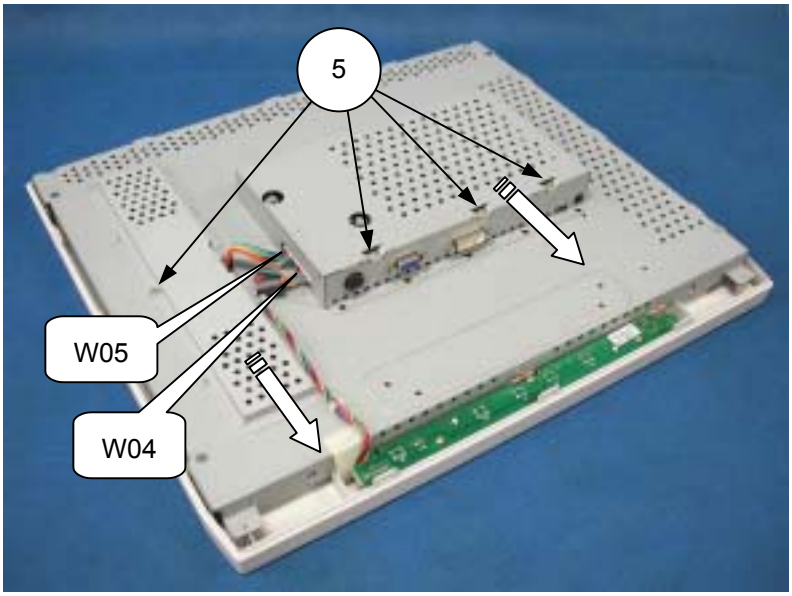
SYMBOL	CODE	DESCRIPTION
3	---	TAP. SCREW-TB #3.0*10.0L,NI



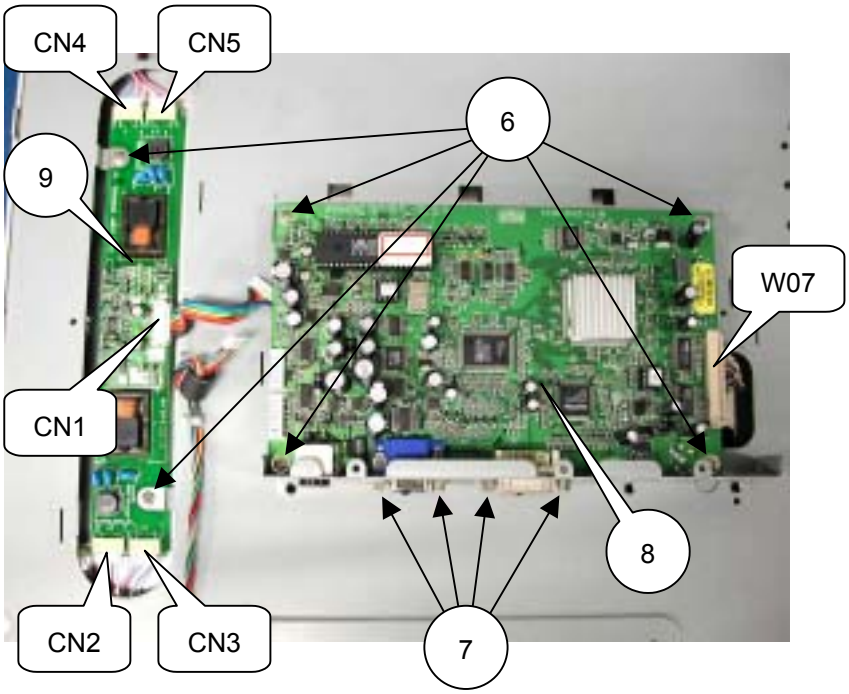
SYMBOL	CODE	DESCRIPTION	COLOR
4	79PZ0166	BACK COVER CAB. LCD1920NX	White
4	79PZ0172	BACK COVER CAB. LCD1920NX	Black



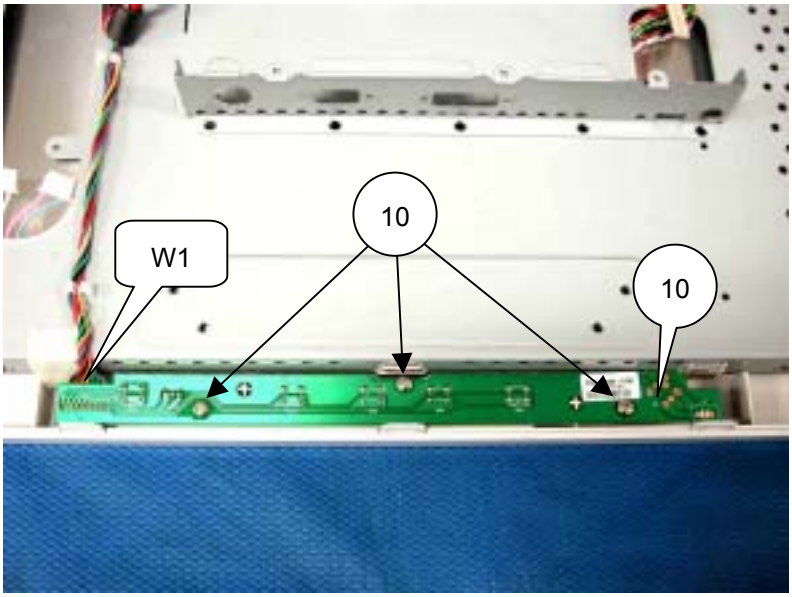
SYMBOL	CODE	DESCRIPTION
5	---	MAC. SCREW-MB M3.0*4.0L,Zn-Cc



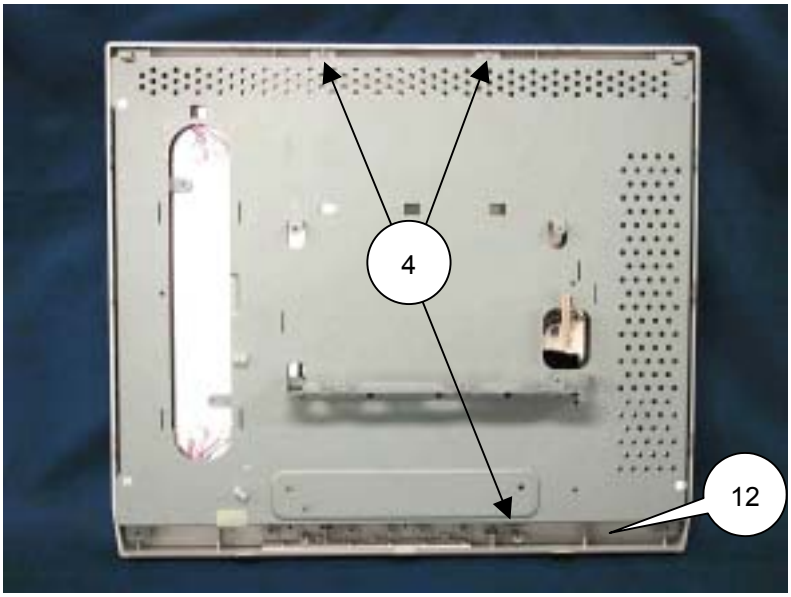
SYMBOL	CODE	DESCRIPTION
6	---	MAC. SCREW-MRFW M3.0*4.0L,NI
7	---	NUT #4-40*5.0L (BRONZE + Ni)
8	79PZ0014	LCD MAIN BD ASS'Y
9	79PZ0008	INVERTER DC-AC T65I008.00



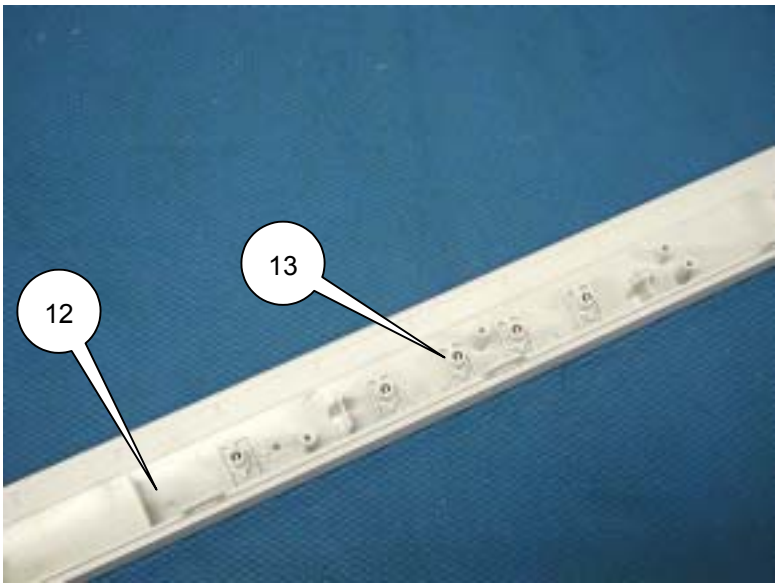
SYMBOL	CODE	DESCRIPTION
10	---	TAP. SCREW-TB #3.0*10.0L,NI
11	79PZ0013	LCD DISPLAY BD ASS'Y



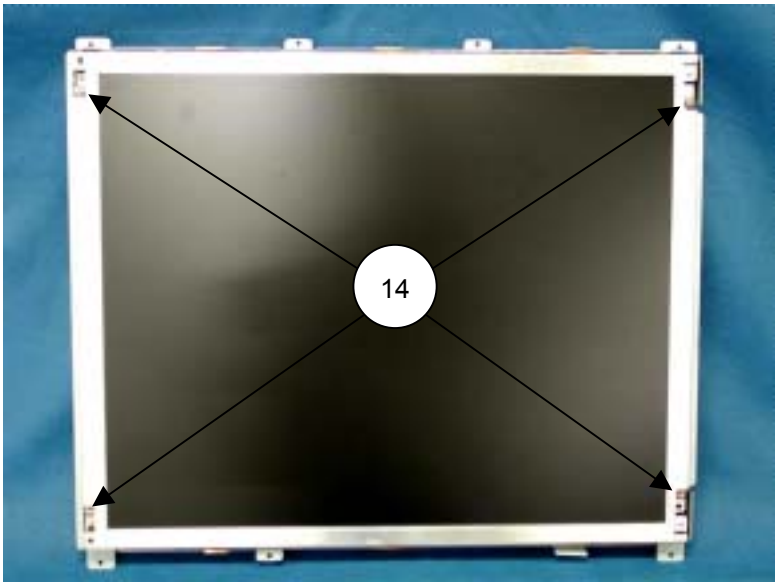
SYMBOL	CODE	DESCRIPTION	COLOR
10	---	TAP. SCREW-TB #3.0*10.0L,NI	
12	79PZ0165	PANEL CAB. LCD1920NX (NEC	White
12	79PZ0171	PANEL CAB. LCD1920NX (NEC	Black



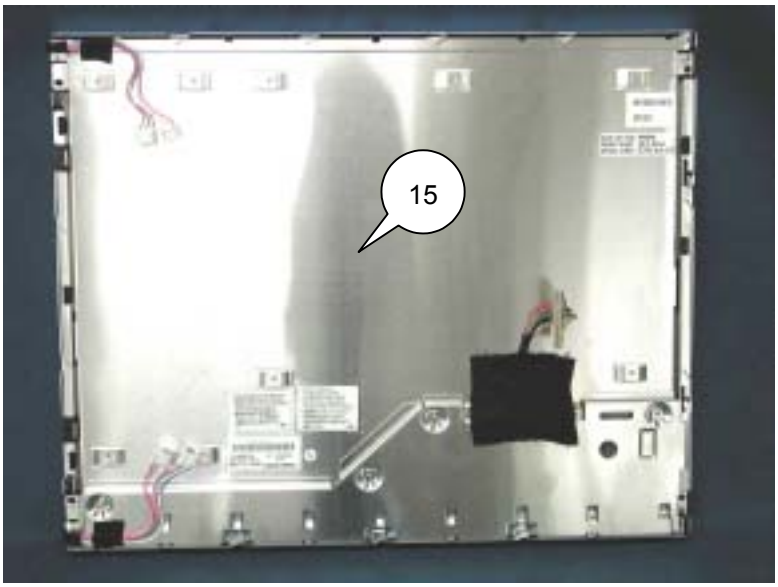
SYMBOL	CODE	DESCRIPTION	COLOR
13	79PZ0162	POWER BUTTON LCD1920NX	White
13	79PZ0009	POWER BUTTON LCD1920NX	Black
12	79PZ0165	PANEL CAB. LCD1920NX (NEC	White
12	79PZ0171	PANEL CAB. LCD1920NX (NEC	Black



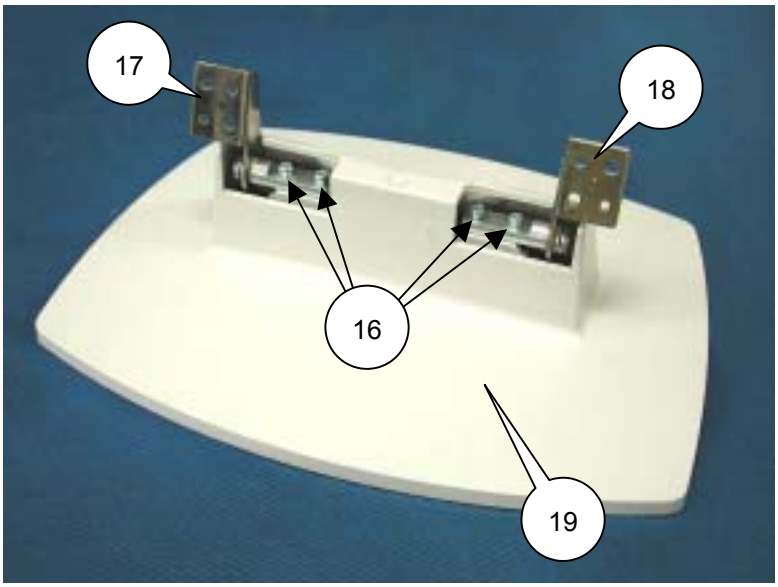
SYMBOL	CODE	DESCRIPTION
14	---	MAC.SCREW-MBSFW M3.0*12.0L.Zn-Cc



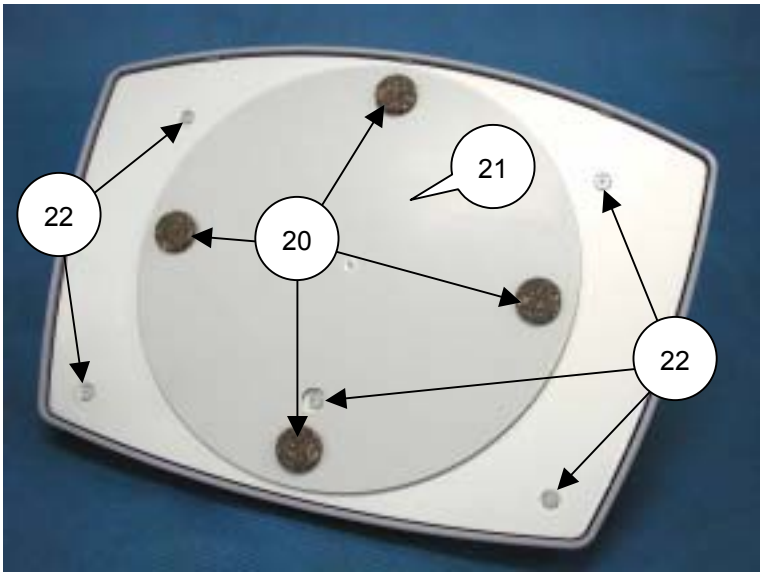
SYMBOL	CODE	DESCRIPTION
15	79PZ0004	LCD MODULE 19.0 TFT FLC4"



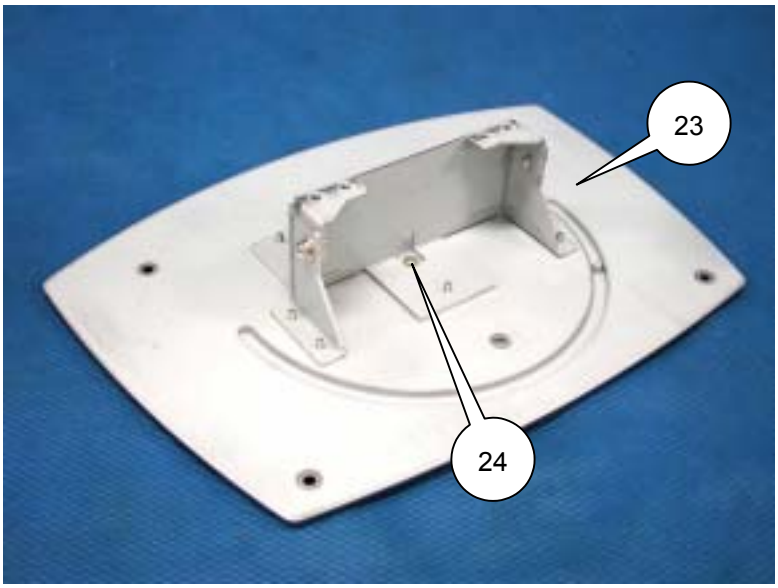
SYMBOL	CODE	DESCRIPTION	COLOR
16	---	MAC. SCREW-MPSWF M4.0*10.0L,ZN	
17	---	HINGE LEFT LCD1920NX	
18	---	HINGE RIGHT LCD1920NX	
19	79PZ0163	BASE CAB. LCD1920NX	White
19	79PZ0001	BASE CAB. LCD1920NX	Black



SYMBOL	CODE	DESCRIPTION
20	79PZ0032	BASE FOOT (18.0*3.0T)
21	79PZ0003	BASE ROTATE LCD1920NX
21	---	SWIVEL SHEET (187*0.5)
22	---	MAC. SCREW-MB M3.0*4.0L,Zn-Cc



SYMBOL	CODE	DESCRIPTION
23	---	BASE BRACKET + HINGE HOLDER LCD1920NX
24	---	MAC. SCREW-MB M3.0*4.0L,Zn-Cc



ADJUSTMENT PROCEDURES

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1. Application

This specification shall be applied to the adjustment of the LCD1920NX set.

2. Basic operation

2.1 General conditions

Unless otherwise specified, adjustments shall be carried out under the following conditions:

1) Power source voltage : AC 100 - 120V/ 220 - 240V ± 10%, 50/60Hz

2) Equipment to be used : Equipment that can generate an output of the adjusted LCD1920NX unit or equivalent.

3) Connections : Connections are made to the D-SUB connector of the unit under inspection by means of the connector that can carry each output of the LCD1920NX. The VIDEO IN of the unit being inspected shall be changed over through D-SUB according to the instructions given in each item.

2.2 Basic operation

2.2.1 Video input change

Irrespective of the presence of any signal input, the video input can be auto change by CPU if input only one source (digital or analog). The signal received first is displayed. An input change can also push the [-] button, when the OSD menu "VIDEO (ANALOG/DIGITAL)" or the OSD menu is not displayed.

2.2.2 Factory mode

At the time of adjustment of this model, a suggestion may be given to enter the user (factory) mode. This will be explained below.

(1) User mode:

1) Press the power Key and verify that LED is green. Press MENU to into OSD MENU.

2) Select COLOR and into color adjust.

3) PRESET1 and PRESET2 is factory setting value user cannot adjust it.

4) Select any one of R G B and into user mode color adjust, press [+] and [-] to adjust color.

(2) Factory mode:

1) Power off the monitor.

2) Press the MENU : AUTO and POWER key at the same until LED is green entered into the Factory mode.

3) Press MENU key to display the OSD menu, and select the PRESET2 color temperature. Please do not adjust it because the value is factory value.

4) Select MAIN MENU → MISC → INFORMATION → [+] or [-] key and into HOURS RUNNING mode. It will show :

a. USER ON : It means monitor used time by user.

b. USER OFF : It means monitor standard by (power saving) and off time by user.

c. FAC. ON : It means monitor used time since assembled in factory.

d. FAC. OFF : It means monitor standard by (power saving) and off time since assembled in factory.

e. CPU TYPE : MTV112MN32

f. CPU CODE : Code of CPU

g. CPU VER. : CPU update date.

Note: To return to user mode from factory mode, just power OFF → ON again.

3. Set adjustments

3.1 Application

This adjustment specification is applicable when the LCD MAIN BD ASSY (MAIN PWB) or the E^2PROM is replaced.

3.2 Source voltage

100-120V / 220-240V ±10% 50 / 60Hz

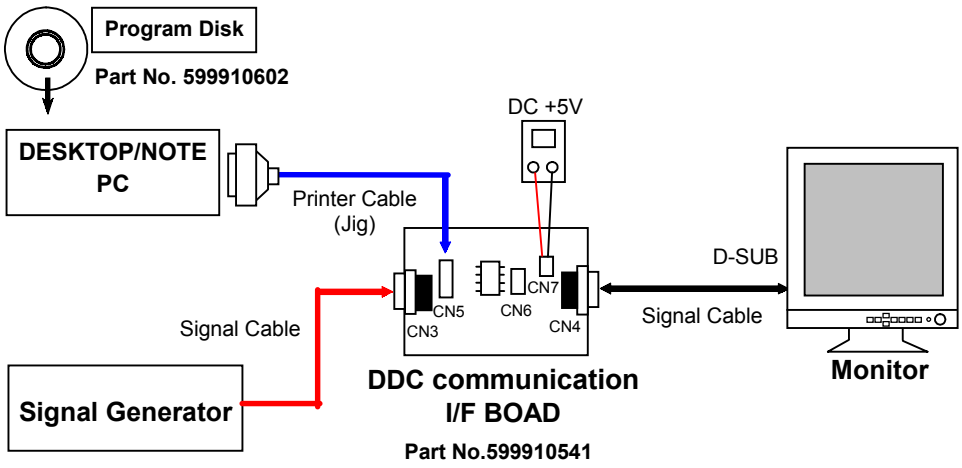
3.3 Adjustments

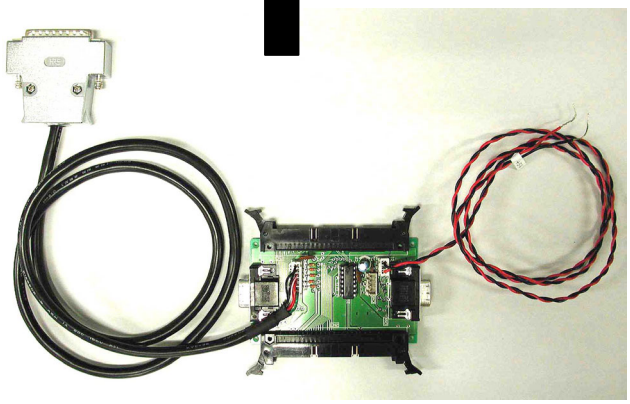
Using DDC-2Bi communication, the initial value data of the color temperature 9300K are written in.

3.3.1 Connection

(1) Configuration

The unit configuration and the method of connection for this system are described below.





(2) Input signal

VESA 1280 × 1024@60Hz (all white pattern)

(3) Program required

RGB adjust software (Part No. 599910602)

3.3.2 Data writing procedures

(1) Connect the data writing unit, jigs, and others for the reception of VESA 1280 × 1024@60Hz (all white).

(2) Let the data writing unit stay in the factory mode. (Refer to 2.2.2 User service mode / factory mode)

(3) Copy all the files of RGB Adjust Software in an appropriate directory.

(4) Execute RGB_ADJ.EXE from the command line.

(5) When the screen as shown in Fig. 1 appears, press the ENTER key to write the data.

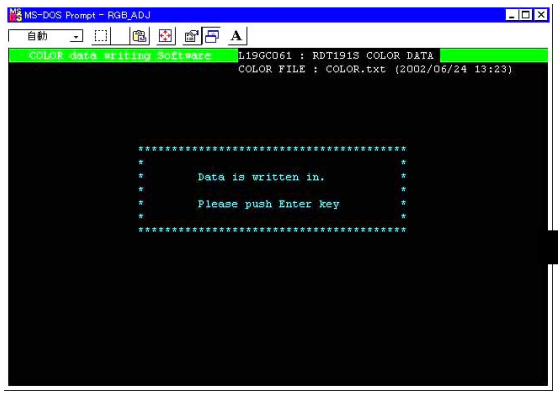


Fig. 1

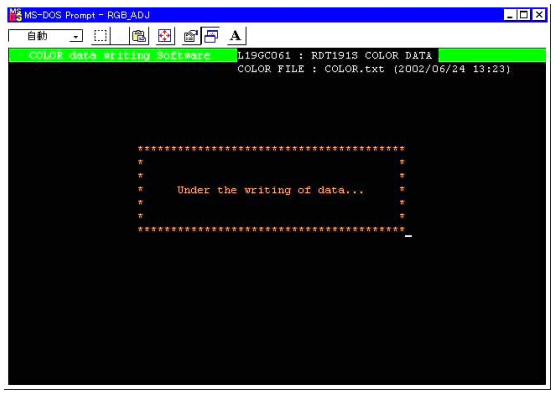


Fig. 2

(6) When the screen as shown in Fig. 2 is displayed in the mean time and normal data writing is finished, the screen as shown in Fig. 3 is displayed.

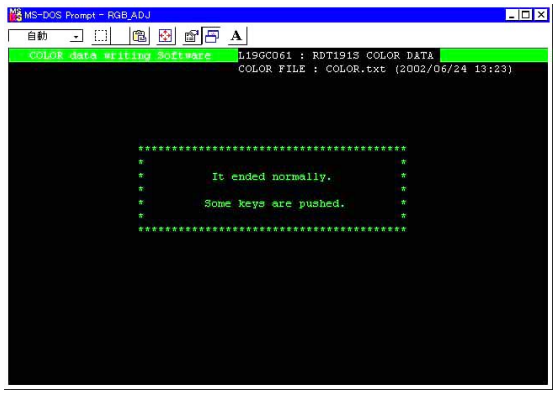


Fig. 3

(7) Turn off the POWER switch of the writing unit and turn it on again, so that the user mode is assumed.

(8) Display the OSD menu and execute [AUTO CONTRAST].

3.4 Input video signal

Preset Mode No.		1
Signal Name		VESA 1280*1024 (60)
Resolution		1280*1024
Dot Clock	(MHz)	108.000
fh	(kHz)	63.981
fv	(Hz)	60.020
Total	(dot)	1688
	(uS)	15.630
Disp	(dot)	1280
	(uS)	11.852
Front	(dot)	48
	(uS)	0.444
Sync Pulse	(dot)	112
	(uS)	1.037
Back	(dot)	248
	(uS)	2.296
Total	(H)	1066
	(mS)	16.661
Disp	(H)	1024
	(mS)	16.005
Front	(H)	1
	(mS)	0.016
Sync Pulse	(H)	3
	(mS)	0.047
Back	(H)	38
	(mS)	0.594
Interlace		NON
Polarity	(H/V)	POS/POS
Composite Sync		
Composite Video		
Character Font		7*9
Serration		OFF
EQP		OFF

3.5 Setting before shipment

CONTRAST	: Approx. 60% (with an analog signal input) / Approx. 80% (with a digital signal input)
BRIGHTNESS	: Approx. 80%
COLOR	: R, G, B at MAX. in all cases (User)
LANGUAGE	: ENGLISH
RESOLUTION NOTIFIER	: ENABLE
H-OSD POSITION / V-OSD POSITION	: Center of the screen
SMOOTHING	: 5 / 9 steps
INVISIBLE	: ON

INSPECTION

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1. Set Inspection

1.1 Application

The inspection procedures specified in this item shall be applied to the inspection of the LCD1920Nx unit.

1.2 Inspection conditions

Unless otherwise specified, inspection shall be carried out under the following conditions.

1.2.1 Power source voltage

AC voltage: 100 - 120V/220 - 240V ± 10% 50/60Hz

1.2.2 Equipment to be used

The signal generator VG-819 which can generate an adjustable output or equivalent can be used.

The signal timing for the inspection ROM shall conform to the table provided in Paragraph 1.2.8 herein.

1.2.3 Brightness setting

Unless otherwise specified, all the inspection shall be carried out under the condition that the LCD brightness is set at the highest level.

1.2.4 Inspection mode

Each inspection shall be carried out in the inspection mode specified in each relevant inspection item.

The detailed setting for each mode shall be specified in Paragraph 1.2.7 herein.

1.2.5 OSD functions

If checking and operation by OSD are specified in each inspection item, display and operation of the OSD shall be carried out by operating the buttons of the unit under inspection, according to the instructions.

Outline operation is described in Item 1.3, “Operation of OSD control.”

1.2.6 Configuration of inspection jigs

1) A video signal generator shall be used, which can generate an output of the VG-819 unit or equivalent.
2) Graphic Board, Model : Matrox Millennium G550 (Manufactured Matrox Electronic Systems Ltd.)
3) PC/AT interchange personal computer.
4) DVI-D to DVI-D Signal Cable.

1.2.7 Inspection mode setting

The respective setting data shall be the data for the VG-819.

Signal			VG-819 setting values				
Mode			01	02	03 Not used	04	05
H	CLOCK	[MHz]	28.322	35.500	21.053	28.322	35.500
	HPERIOD	[DOT]	900	936	848	900	936
	HDISP	[DOT]	720	720	640	720	720
	HSYNC	[DOT]	108	72	64	108	72
	HBACKP	[DOT]	54	108	84	54	108
	HDSTART	[DOT]	0	0	0	0	0
	HDWIDTH	[DOT]	0	0	0	0	0
V	VTOTAL	[H]	449	446	440	449	446
	VDISP	[H]	350	350	400	400	400
	VSYNC	[H]	2	3	8	2	3
	VBACKP	[H]	60	61	25	35	42
	EQP FP	[H]	0	0	0	0	0
	EQP BP	[H]	0	0	0	0	0
	SERRATION		OFF	OFF	OFF	OFF	OFF
	EQP		OFF	OFF	OFF	OFF	OFF
	VDSTART	[H]	0	0	0	0	0
	VDLINE	[H]	0	0	0	0	0
	SCAN		Nonint	Nonint	Nonint	Nonint	Nonint
OUTPUT	NRZ/RZ		NRZ	NRZ	NRZ	NRZ	NRZ
	HS		POSI	POSI	NEGA	NEGA	NEGA
	VS		NEGA	NEGA	NEGA	POSI	POSI
	CS		NEGA	NEGA	NEGA	NEGA	NEGA
	HD		NEGA	NEGA	NEGA	NEGA	NEGA
	VD		NEGA	NEGA	NEGA	NEGA	NEGA
	CLOCK		NEGA	NEGA	NEGA	NEGA	NEGA
	SYNC ON						
	RGB		POSI	POSI	POSI	POSI	POSI
	VIDEO		0.70V	0.70V	0.70V	0.70V	0.70V
	SETUP		OFF	OFF	OFF	OFF	OFF
	CLKMODE		1/2	1/2	1/2	1/2	1/2
	CLKOUT		ALL	ALL	ALL	ALL	ALL
	DISP,1CH,2CH		POSI	POSI	POSI	POSI	POSI
	SW0,SW1		OFF	OFF	OFF	OFF	OFF
	RGB		8 bit	8 bit	8 bit	8 bit	8 bit
	R(7-0),G(7-0),B(7-0)		11111111	11111111	11111111	11111111	11111111
	DELAY		ON	ON	ON	ON	ON
	CLOCK DELAY		4 nsec	4 nsec	4 nsec	4 nsec	4 nsec
PAT SEL			OPTION 2	OPTION 2	OPTION 2	OPTION 2	OPTION 2
CHRA PATTERN	Format		1	1	1	1	1
	Code		82	82	82	82	82
	Font		16*16	16*16	16*16	16*16	16*16
	Cell		16*16	16*16	16*16	16*16	16*16
GRAY	Direction : 0		L0: 0 L1: 17 L2: 34 L3: 51 L4: 68 L5: 85 L6: 102 L7: 127 L8: 143 L9: 159 LA: 175 LB: 191 LC: 207 LD: 223 LE: 239 LF: 255				
OPTION 2			(Note 2)				

Signal			VG-819 setting values				
Mode			06	07	08	09	10
H	CLOCK	[MHz]	25.18	30.24	31.5	31.5	36.0
	HPERIOD	[DOT]	800	864	832	840	832
	HDISP	[DOT]	640	640	640	640	640
	HSYNC	[DOT]	96	64	40	64	56
	HBACKP	[DOT]	48	96	128	120	80
	HDSTART	[DOT]	0	0	0	0	0
	HDWIDTH	[DOT]	0	0	0	0	0
V	VTOTAL	[H]	525	525	520	500	509
	VDISP	[H]	480	480	480	480	480
	VSYNC	[H]	2	3	3	3	3
	VBACKP	[H]	33	39	28	16	25
	EQP FP	[H]	0	0	0	0	0
	EQP BP	[H]	0	0	0	0	0
	SERRATION		OFF	OFF	OFF	OFF	OFF
	EQP		OFF	OFF	OFF	OFF	OFF
	VDSTART	[H]	0	0	0	0	0
	VDLINE	[H]	0	0	0	0	0
	SCAN		Nonint	Nonint	Nonint	Nonint	Nonint
OUTPUT	NRZ/RZ		NRZ	NRZ	NRZ	NRZ	NRZ
	HS		NEGA	NEGA	NEGA	NEGA	NEGA
	VS		NEGA	NEGA	NEGA	NEGA	NEGA
	CS		NEGA	NEGA	NEGA	NEGA	NEGA
	HD		NEGA	NEGA	NEGA	NEGA	NEGA
	VD		NEGA	NEGA	NEGA	NEGA	NEGA
	CLOCK		NEGA	NEGA	NEGA	NEGA	NEGA
	SYNC ON			G			
	RGB		POSI	POSI	POSI	POSI	POSI
	VIDEO		0.70V	0.70V	0.70V	0.70V	0.70V
	SETUP		OFF	OFF	OFF	OFF	OFF
	CLKMODE		1/2	1/2	1/2	1/2	1/2
	CLKOUT		ALL	ALL	ALL	ALL	ALL
	DISP,1CH,2CH		POSI	POSI	POSI	POSI	POSI
	SW0,SW1		OFF	OFF	OFF	OFF	OFF
	RGB		8 bit	8 bit	8 bit	8 bit	8 bit
	R(7-0),G(7-0),B(7-0)		11111111	11111111	11111111	11111111	11111111
	DELAY		ON	ON	ON	ON	ON
	CLOCK DELAY		4 nsec	4 nsec	4 nsec	4 nsec	4 nsec
PAT SEL			OPTION 2	OPTION 2	OPTION 2	OPTION 2	OPTION 2
CHRA PATTERN	Format		1	1	1	1	1
	Code		82	82	82	82	82
	Font		16*16	16*16	16*16	16*16	16*16
	Cell		16*16	16*16	16*16	16*16	16*16
GRAY	Direction : 0		L0: 0 L1: 17 L2: 34 L3: 51 L4: 68 L5: 85 L6: 102 L7: 127 L8: 143 L9: 159 LA: 175 LB: 191 LC: 207 LD: 223 LE: 239 LF: 255				
OPTION 2			(Note 2)				

Signal			VG-819 setting values				
Mode			11	12	13	14	15
H	CLOCK	[MHz]	36.0	40.0	49.5	50.0	56.25
	HPERIOD	[DOT]	1024	1056	1056	1040	1048
	HDISP	[DOT]	800	800	800	800	800
	HSYNC	[DOT]	72	128	80	120	64
	HBACKP	[DOT]	128	88	160	64	152
	HDSTART	[DOT]	0	0	0	0	0
	HDWIDTH	[DOT]	0	0	0	0	0
V	VTOTAL	[H]	625	628	625	666	631
	VDISP	[H]	600	600	600	600	600
	VSYNC	[H]	2	4	3	6	3
	VBACKP	[H]	22	23	21	23	27
	EQP FP	[H]	0	0	0	0	0
	EQP BP	[H]	0	0	0	0	0
	SERRATION		OFF	OFF	OFF	OFF	OFF
	EQP		OFF	OFF	OFF	OFF	OFF
	VDSTART	[H]	0	0	0	0	0
	VDLINE	[H]	0	0	0	0	0
	SCAN		Nonint	Nonint	Nonint	Nonint	Nonint
OUTPUT	NRZ/RZ		NRZ	NRZ	NRZ	NRZ	NRZ
	HS		POSI	POSI	POSI	POSI	POSI
	VS		POSI	POSI	POSI	POSI	POSI
	CS		NEGA	NEGA	NEGA	NEGA	NEGA
	HD		NEGA	NEGA	NEGA	NEGA	NEGA
	VD		NEGA	NEGA	NEGA	NEGA	NEGA
	CLOCK		NEGA	NEGA	NEGA	NEGA	NEGA
	SYNC ON						
	RGB		POSI	POSI	POSI	POSI	POSI
	VIDEO		0.70V	0.70V	0.70V	0.70V	0.70V
	SETUP		OFF	OFF	OFF	OFF	OFF
	CLKMODE		1/2	1/2	1/2	1/2	1/2
	CLKOUT		ALL	ALL	ALL	ALL	ALL
	DISP,1CH,2CH		POSI	POSI	POSI	POSI	POSI
	SW0,SW1		OFF	OFF	OFF	OFF	OFF
	RGB		8 bit	8 bit	8 bit	8 bit	8 bit
	R(7-0),G(7-0),B(7-0)		11111111	11111111	11111111	11111111	11111111
	DELAY		ON	ON	ON	ON	ON
	CLOCK DELAY		4 nsec	4 nsec	4 nsec	4 nsec	4 nsec
PAT SEL			OPTION 2	OPTION 2	OPTION 2	OPTION 2	OPTION 2
CHRA PATTERN	Format		1	1	1	1	1
	Code		82	82	82	82	82
	Font		16*16	16*16	16*16	16*16	16*16
	Cell		16*16	16*16	16*16	16*16	16*16
GRAY	Direction : 0		L0:0 L1:17 L2:34 L3:51 L4:68 L5:85 L6:102 L7:127 L8:143 L9:159 LA:175 LB:191 LC:207 LD:223 LE:239 LF:255				
OPTION 2			(Note 2)				

Signal			VG-819 setting values				
Mode			16	17	18	19	20
H	CLOCK	[MHz]	57.28	65.0	70.49	75.0	78.75
	HPERIOD	[DOT]	1152	1344	1344	1328	1312
	HDISP	[DOT]	832	1024	1024	1024	1024
	HSYNC	[DOT]	64	136	136	136	96
	HBACKP	[DOT]	224	160	160	144	176
	HDSTART	[DOT]	0	0	0	0	0
	HDWIDTH	[DOT]	0	0	0	0	0
V	VTOTAL	[H]	667	806	806	806	800
	VDISP	[H]	624	768	768	768	768
	VSYNC	[H]	3	6	6	6	3
	VBACKP	[H]	39	29	29	29	28
	EQP FP	[H]	0	0	0	0	0
	EQP BP	[H]	0	0	0	0	0
	SERRATION		OFF	OFF	OFF	OFF	OFF
	EQP		OFF	OFF	OFF	OFF	OFF
	VDSTART	[H]	0	0	0	0	0
	VDLINE	[H]	0	0	0	0	0
	SCAN		Nonint	Nonint	Nonint	Nonint	Nonint
OUTPUT	NRZ/RZ		NRZ	NRZ	NRZ	NRZ	NRZ
	HS		NEGA	NEGA	NEGA	NEGA	POSI
	VS		NEGA	NEGA	NEGA	NEGA	POSI
	CS		POSI	NEGA	NEGA	NEGA	NEGA
	HD		POSI	NEGA	NEGA	NEGA	NEGA
	VD		POSI	NEGA	NEGA	NEGA	NEGA
	CLOCK		POSI	NEGA	NEGA	NEGA	NEGA
	SYNC ON		G				G
	RGB		POSI	POSI	POSI	POSI	POSI
	VIDEO		0.70V	0.70V	0.70V	0.70V	0.70V
	SETUP		OFF	OFF	OFF	OFF	OFF
	CLKMODE		1/2	1/2	1/2	1/2	1/2
	CLKOUT		ALL	ALL	ALL	ALL	ALL
	DISP,1CH,2CH		POSI	POSI	POSI	POSI	POSI
	SW0,SW1		OFF	OFF	OFF	OFF	OFF
	RGB		8 bit	8 bit	8 bit	8 bit	8 bit
	R(7-0),G(7-0),B(7-0)		11111111	11111111	11111111	11111111	11111111
	DELAY		ON	ON	ON	ON	ON
	CLOCK DELAY		4 nsec	4 nsec	4 nsec	4 nsec	4 nsec
PAT SEL			OPTION 2	OPTION 2	OPTION 2	OPTION 2	OPTION 2
CHRA PATTERN	Format		1	1	1	1	1
	Code		82	82	82	82	82
	Font		16*16	16*16	16*16	16*16	16*16
	Cell		16*16	16*16	16*16	16*16	16*16
GRAY	Direction : 0		L0:0 L1:17 L2:34 L3:51 L4:68 L5:85 L6:102 L7:127 L8:143 L9:159 LA:175 LB:191 LC:207 LD:223 LE:239 LF:255				
OPTION 2			(Note 2)				

Signal			VG-819 setting values				
Mode			21	22	23	24	25 Not used
H	CLOCK	[MHz]	94.5	94.50	108.00	126.00	107.50
	HPERIOD	[DOT]	1376	1528	1800	1680	1664
	HDISP	[DOT]	1024	1152	1280	1280	1280
	HSYNC	[DOT]	96	128	112	144	192
	HBACKP	[DOT]	208	208	312	224	160
	HDSTART	[DOT]	0	0	0	0	0
	HDWIDTH	[DOT]	0	0	0	0	0
V	VTOTAL	[H]	808	937	1000	1000	1078
	VDISP	[H]	768	900	960	960	1024
	VSYNC	[H]	3	4	3	3	4
	VBACKP	[H]	36	31	36	36	43
	EQP FP	[H]	0	0	0	0	0
	EQP BP	[H]	0	0	0	0	0
	SERRATION		OFF	OFF	OFF	OFF	OFF
	EQP		OFF	OFF	OFF	OFF	OFF
	VDSTART	[H]	0	0	0	0	0
	VDLINE	[H]	0	0	0	0	0
	SCAN		Nonint	Nonint	Nonint	Nonint	Nonint
OUTPUT	NRZ/RZ		NRZ	NRZ	NRZ	NRZ	NRZ
	HS		POSI	POSI	POSI	NEGA	POSI
	VS		POSI	POSI	POSI	NEGA	POSI
	CS		NEGA	NEGA	NEGA	NEGA	NEGA
	HD		NEGA	NEGA	NEGA	NEGA	NEGA
	VD		NEGA	NEGA	NEGA	NEGA	NEGA
	CLOCK		NEGA	NEGA	NEGA	NEGA	NEGA
	SYNC ON						
	RGB		POSI	POSI	POSI	POSI	POSI
	VIDEO		0.70V	0.70V	0.70V	0.70V	0.70V
	SETUP		OFF	OFF	OFF	OFF	OFF
	CLKMODE		1/2	1/2	1/2	1/2	1/2
	CLKOUT		ALL	ALL	ALL	ALL	ALL
	DISP,1CH,2CH		POSI	POSI	POSI	POSI	POSI
	SW0,SW1		OFF	OFF	OFF	OFF	OFF
	RGB		8 bit	8 bit	8 bit	8 bit	8 bit
	R(7-0),G(7-0),B(7-0)		11111111	11111111	11111111	11111111	11111111
	DELAY		ON	ON	ON	ON	ON
	CLOCK DELAY		4 nsec	4 nsec	4 nsec	4 nsec	4 nsec
PAT SEL			OPTION 2	OPTION 2	OPTION 2	OPTION 2	OPTION 2
CHRA PATTERN	Format		1	1	1	1	1
	Code		82	82	82	82	82
	Font		16*16	16*16	16*16	16*16	16*16
	Cell		16*16	16*16	16*16	16*16	16*16
GRAY	Direction : 0		L0:0 L1:17 L2:34 L3:51 L4:68 L5:85 L6:102 L7:127 L8:143 L9:159 LA:175 LB:191 LC:207 LD:223 LE:239 LF:255				
OPTION 2			(Note 2)				

Signal			VG-819 setting values				
Mode			26	27	28	29	30
H	CLOCK	[MHz]	108.00	117.00	135.00	135.00	94.50
	HPERIOD	[DOT]	1688	1632	1688	1664	1480
	HDISP	[DOT]	1280	1280	1280	1280	1152
	HSYNC	[DOT]	112	112	144	64	96
	HBACKP	[DOT]	248	224	248	288	200
	HDSTART	[DOT]	0	0	0	0	0
	HDWIDTH	[DOT]	0	0	0	0	0
V	VTOTAL	[H]	1066	1067	1066	1066	912
	VDISP	[H]	1024	1024	1024	1024	864
	VSYNC	[H]	3	8	3	8	3
	VBACKP	[H]	38	33	38	32	44
	EQP FP	[H]	0	0	0	0	0
	EQP BP	[H]	0	0	0	0	0
	SERRATION		OFF	OFF	OFF	OFF	OFF
	EQP		OFF	OFF	OFF	OFF	OFF
	VDSTART	[H]	0	0	0	0	0
	VDLINE	[H]	0	0	0	0	0
	SCAN		Nonint	Nonint	Nonint	Nonint	Nonint
OUTPUT	NRZ/RZ		NRZ	NRZ	NRZ	NRZ	NRZ
	HS		POSI	POSI	POSI	POSI	POSI
	VS		POSI	POSI	POSI	POSI	POSI
	CS		NEGA	NEGA	POSI	POSI	POSI
	HD		NEGA	NEGA	NEGA	NEGA	NEGA
	VD		NEGA	NEGA	NEGA	NEGA	NEGA
	CLOCK		NEGA	NEGA	NEGA	NEGA	NEGA
	SYNC ON						
	RGB		POSI	POSI	POSI	POSI	POSI
	VIDEO		0.70V	0.70V	0.70V	0.70V	0.70V
	SETUP		OFF	OFF	OFF	OFF	OFF
	CLKMODE		1/2	1/2	1/2	1/2	1/2
	CLKOUT		ALL	ALL	ALL	ALL	ALL
	DISP,1CH,2CH		POSI	POSI	POSI	POSI	POSI
	SW0,SW1		OFF	OFF	OFF	OFF	OFF
	RGB		8 bit	8 bit	8 bit	8 bit	8 bit
	R(7-0),G(7-0),B(7-0)		11111111	11111111	11111111	11111111	11111111
	DELAY		ON	ON	ON	ON	ON
	CLOCK DELAY		4 nsec	4 nsec	4 nsec	4 nsec	4 nsec
PAT SEL			OPTION 2	OPTION 2	OPTION 2	OPTION 2	OPTION 2
CHRA PATTERN	Format		1	1	1	1	1
	Code		82	82	82	82	82
	Font		16*16	16*16	16*16	16*16	16*16
	Cell		16*16	16*16	16*16	16*16	16*16
GRAY	Direction : 0		L0:0 L1:17 L2:34 L3:51 L4:68 L5:85 L6:102 L7:127 L8:143 L9:159 LA:175 LB:191 LC:207 LD:223 LE:239 LF:255				
OPTION 2			(Note 2)				

Signal			VG-819 setting values				
Mode			31	32	33	34	35
H	CLOCK	[MHz]	108.00	162.00	108.00		
	HPERIOD	[DOT]	1600	2160	1688		
	HDISP	[DOT]	1152	1600	1280		
	HSYNC	[DOT]	128	192	112		
	HBACKP	[DOT]	256	304	248		
	HDSTART	[DOT]	0	0	0		
	HDWIDTH	[DOT]	0	0	0		
V	VTOTAL	[H]	900	1250	1066		
	VDISP	[H]	864	1200	1024		
	VSYNC	[H]	3	3	3		
	VBACKP	[H]	32	46	6380		
	EQP FP	[H]	0	0	0		
	EQP BP	[H]	0	0	0		
	SERRATION		OFF	OFF	OFF		
	EQP		OFF	OFF	OFF		
	VDSTART	[H]	0	0	0		
	VDLINE	[H]	0	0	0		
	SCAN		Nonint	Nonint	Nonint		
OUTPUT	NRZ/RZ		NRZ	NRZ	NRZ		
	HS		POSI	POSI	POSI		
	VS		POSI	POSI	POSI		
	CS		POSI	POSI	NEGA		
	HD		NEGA	NEGA	NEGA		
	VD		NEGA	NEGA	NEGA		
	CLOCK		NEGA	NEGA	NEGA		
	SYNC ON						
	RGB		POSI	POSI	POSI		
	VIDEO		0.70V	0.70V	0.70V		
	SETUP		OFF	OFF	OFF		
	CLKMODE		1/2	1/2	1/2		
	CLKOUT		ALL	ALL	ALL		
	DISP,1CH,2CH		POSI	POSI	POSI		
	SW0,SW1		OFF	OFF	OFF		
	RGB		8 bit	8 bit	8 bit		
	R(7-0),G(7-0),B(7-0)		11111111	11111111	11111111		
	DELAY		ON	ON	ON		
	CLOCK DELAY		4 nsec	4 nsec	4 nsec		
PAT SEL			OPTION 2	OPTION 2	OPTION 2		
CHRA PATTERN	Format		1	1	1		
	Code		82	82	82		
	Font		16*16	16*16	16*16		
	Cell		16*16	16*16	16*16		
GRAY	Direction : 0		L0:0 L1:17 L2:34 L3:51 L4:68 L5:85 L6:102 L7:127 L8:143 L9:159 LA:175 LB:191 LC:207 LD:223 LE:239 LF:255				
OPTION 2			(Note 2)				

Signal		VG-819 setting values				
Mode		36	37	38	39	40
H	CLOCK [MHz]				34.40	34.40
	HPERIOD [DOT]				800	800
	HDISP [DOT]				640	640
	HSYNC [DOT]				96	96
	HBACKP [DOT]				48	48
	HDSTART [DOT]				0	0
	HDWIDTH [DOT]				0	0
V	VTOTAL [H]				1024	1024
	VDISP [H]				480	480
	VSYNC [H]				2	2
	VBACKP [H]				33	33
	EQP FP [H]				0	0
	EQP BP [H]				0	0
	SERRATION				OFF	OFF
	EQP				OFF	OFF
	VDSTART [H]				0	0
	VDLINE [H]				0	0
	SCAN				Nonint	Nonint
OUTPUT	NRZ/RZ				NRZ	NRZ
	HS				NEGA	NEGA
	VS				POSI	NEGA
	CS				NEGA	NEGA
	HD				NEGA	NEGA
	VD				POSI	POSI
	CLOCK				NEGA	NEGA
	SYNC ON					
	RGB				POSI	POSI
	VIDEO				0.70V	0.70V
	SETUP				OFF	OFF
	CLKMODE				1/2	1/2
	CLKOUT				ALL	ALL
	DISP,1CH,2CH				POSI	POSI
	SW0,SW1				OFF	OFF
	RGB				8 bit	8 bit
	R(7-0),G(7-0),B(7-0)				11111111	11111111
	DELAY				ON	ON
	CLOCK DELAY				4 nsec	4 nsec
PAT SEL					CHARA □	CHARA □
CHRA PATTERN	Format				1	1
	Code				82	82
	Font				16*16	16*16
	Cell				16*16	16*16
GRAY	Direction : 0	L0:0 L1:17 L2:34 L3:51 L4:68 L5:85 L6:102 L7:127 L8:143 L9:159 LA:175 LB:191 LC:207 LD:223 LE:239 LF:255				

Note 1:

According to the designation of sync signals and the setting of each inspection mode, the analog outputs (BNC) of the signal generator shall be connected as specified below. (Except the cases when otherwise specified)

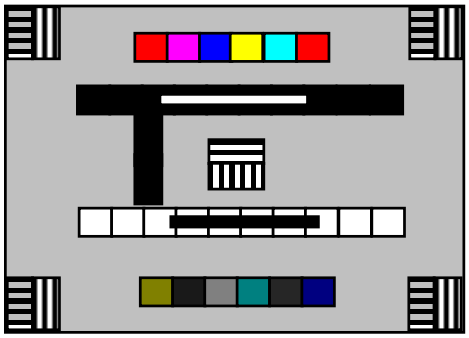
1) SEPARATE: R/G/B CONNECTION, HS ←→ H, VS ←→ V, CS not connected

2) COMPOSITE: R/G/B CONNECTION, CS ←→ H No connections for HS and VS

3) SYNC ON GREEN: R/G/B CONNECTION, No connections for HS, VS, and CS

Note 2:

Option 2 Screen



1.3 Operational description of OSD control

Each OSD function is available by pressing the buttons (MENU, -, +, AUTO) located on the lower section of the front bezel.

1.3.1 Function of each button

The basic function of each button (also called a key, but it bears the same meaning) is explained below.

In case of no OSD display, either buttons of MENU, -, + or AUTO may be pressed to display an OSD menu.

1) OSD function control

MENU	: Displays the OSD and selecting the adjusting function by pressing this button or exiting the OSD after keeping press this button.
-	: Moves the cursor downward to select adjustment item after OSD menu is displayed or the tab is moved leftward to decrease the adjusting value by pressing this button after the adjustment function is selected.
+	: Moves the cursor upward to select adjustment item or the tab is moved to the right to increase the adjusting value by pressing this button.
AUTO	: The auto sync function is activated by pressing this button.

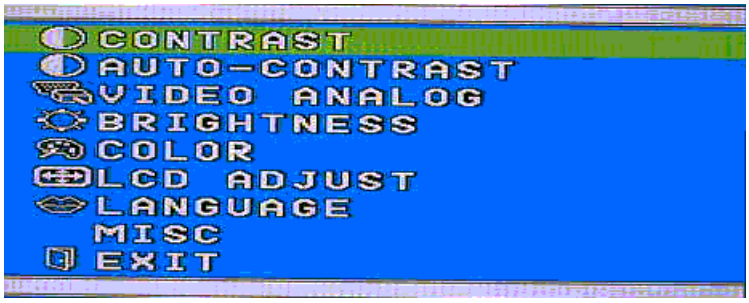
2) Hot key function control

MENU	: Displays the OSD and selecting the adjusting function by pressing this button or exiting the OSD after pressing this button.
DVI/D-SUB (-)	: An input signal is selected by defining whether it should be picked up from the DVI connector or the D-SUB connector. Each time this button is pressed directly, a change takes place between the DVI connector and the D-SUB connector.
+	: The auto contrast function is activated by press this button directly.
AUTO	: The auto sync function is activated by pressing this button.

Note: Unless otherwise specified, the D-SUB input should be used in each inspection.

1.3.2 Procedures for the basic operation

1) Press the MENU button and confirm that the main menu shown below is displayed.



2) The selection tab moves to the way down rolling and up rolling with the -down and +up buttons. When the adjustment tab has been selected, select the adjustment item by the using the MENU button and set up the adjusting value with the +right and -left buttons. In case when an adjustment item of automatic adjustment function (AUTO-CONTRAST or AUTO-SYNC) has been selected, execute this automatic adjustment by the using the MENU button.

3) When the inspection is over, press the MENU button for a while or select EXIT item to exit from the OSD menu.

1.4 POWER ON

Turn on the power supply in the procedures specified below.

1) Make connections according to the mode in which the VG-819 cable is being set.
2) Turn on the POWER switch of the VG-819 unit.
3) Connect the AC POWER cord to the unit under inspection.
4) Turn on the POWER switch of the unit under inspection.
5) The LED of the unit under inspection is lit in yellow-green after turning on the power.

Note 1: When the POWER source switch is turned on for the first time, the initialization of EEPROM is effected. In this period (about 5 seconds), the POWER switch must not be moved to the ON or OFF position. Upon the completion of the initialization, a normal screen is displayed. (If no signal input is entered, the “NO SIGNAL” OSD is displayed.)

Note 2: Since an electrified condition is assumed with the AC POWER cable left connected, connections for the connectors should be carried out always under the condition that the AC POWER cord plug has been pulled out.

1.5 Inspection

1.5.1 Inspection of LCD brightness and contrast

1) Enter input Signal 26 through the D-SUB port. This action makes the screen display in all white.
2) Display the OSD menu by pressing the MENU key and move the tab by pressing –down and +up keys. Display the BRIGHTNESS adjustment screen by pressing MENU button.
3) Confirm that the white bar makes changes and the screen brightness is also changes when the +right and -left buttons are operated.
4) Select contrast function on main menu by pressing. Adjust the cursor of CONTRAST by using the +right and -left buttons
5) Confirm that the white bar makes changes and the screen contrast is also changed when the +right and -left buttons are operated.
6) Select MISC by pressing –down or +up buttons and enter MISC menu from main menu by pressing MENU button, then select RECALL by pressing –down or +up buttons and execute RECALL to reset the contrast and brightness conditions. Make sure the contrast and brightness values are reset and the screen is returned to its original state.

1.5.2 Inspection of automatic adjustment function

1) Enter Signal 26 through D-SUB port. (A screen of one-dot missing plus external frame)
2) Display an OSD menu. Using the +up and -down buttons to select LCD ADJUST and enter the LCD ADJUST menu by press MENU button. Using the +up and -down buttons to select H-POSITION and display H-POSITION adjusting OSD by press MENU button.
3) Adjust the cursor to RIGHT/LEFT by using the +right and -left buttons to shift the horizontal position until the difference can be perceived visually.
4) Similarly as for UP/DOWN, make a shift from the initial value in operating on V-POSITION adjusting OSD.
5) Return to the tab by using the MENU button. Using the +up and -down buttons to select H-SIZE and display the H-SIZE adjusting OSD by press MENU button.
6) In the same manner as described above, shift H-SIZE from the initial values.
7) Return to the tab by using the MENU button. Using the +up and -down buttons to select FINE TUNE and display the FINE TUNE adjusting OSD by press MENU button.
8) In the same manner as described above, shift FINE TUNE from the initial values.
9) Return to the tab by using the MENU button. Using the +up and -down buttons to select AUTO-SYNC and press MENU button to do AUTO-SYNC adjustment.
10) Execute inspection with confirming that the screen (for position, size, and phase) has been normally adjusted.

1.5.3 Inspection of input signal discrimination

Purpose of this inspection: Intended to confirm that a normal display is presented for any signal input.
Unless otherwise specified, the display pattern shall conform to the initial screen as defined in 1.2.7, “Inspection mode setting.”

--- Inspection of signal inputs ---

1) According to the table specified below, setting of input port/signal is performed and a signal input is entered.

Mode No.	Inspection signal No.
0	1
2	4
3	6
4	8
5	9
6	7
7	11
8	12
9	14
10	13
11	16
12	17
13	19
16	20
17	23
18	28

2) When a screen display is presented, visually confirm that there is no abnormality in the display.

(There shall be no extreme displacement in position, size, and phase. The screen shall be free from flickering. / There shall be no extreme error in the chromaticity.)

3) Check the OSD for the signals. Secure an OSD display and indicate the information screen by pressing MENU, +up and –down buttons. Adjust the cursor to MISC with the +up and –down buttons, the pressing MENU button to enter sub-menu of MISC. Adjust the cursor again to INFORMATION with the +up and –down buttons, display the [INFORMATION] screen by pressing the MENU key. Confirm that the displayed definition matches with the input signal.

--- Inspection of SYNC on GREEN inputs ---

4) According to the table below, enter a signal input of SYNC on GREEN and confirm that a normal screen is displayed.

Mode No.	Inspection signal No.	SYNC
6	7	SYNC on GREEN
11	16	SYNC on GREEN
16	20	SYNC on GREEN

At this stage, inspection of input signal discrimination has been finished.

1.5.4 Inspection of VIDEO DETECT function

This inspection shall be carried out to confirm that the [VIDEO] function of the OSD menu is normally available and that the video input port is automatically changed according to the combination of video inputs.

Signal : Digital signal (1280*1024@60Hz)

Signal : 26 (SXGA, separate) : All black

Equipment to be used for inspection:

Signal Source 1 : Graphic Board, Model : Matrox Millennium G550 (Manufactured Matrox Electronic Systems Ltd.) or equivalent.

Signal Source 2 : Analog output

Initial conditions:

Signal Source 1: Digital signal (1280*1024@60Hz)

Signal Source 2: Set at Signal 26

The video input shall be available at D-SUB input.

[Method of inspection]

1) In the initial state, enter OSD main menu. The current video input type is shown VIDEO ANALOG or VIDEO DIGITAL. Press MENU button to select the video input port.
2) In the procedures specified in the table below, try to connect and disconnect the cables for signal exchange in order to confirm whether the resultant operation is the same as described in the “result” shown in the table below. In the column on the right side of the table below, the conditions of connections at that time are described for the respective ports.

Operation	Result	Signal Source 1	Signal Source 2
	Selected port	DVI	D-SUB
INITIAL STATE	ANALOG	Digital signal (1280*1024@60Hz)	Signal 26
Pull out the D-SUB connector.	DIGITAL	Digital signal (1280*1024@60Hz)	×
Connect the D-SUB connector.	DIGITAL	Digital signal (1280*1024@60Hz)	Signal 26
Pull out the DVI connector.	ANALOG	×	Signal 26
Connect the DVI connector.	ANALOG	Digital signal (1280*1024@60Hz)	Signal 26

“×” indicates that no connector is connected.

The selected port can be examined according to the [VIDEO INPUT] OSD that is displayed at the time of signal changeover. (Displays of [NO SIGNAL], [OUT OF RANGE], etc. are regarded as rejection.)

1.6 Setting before shipment

In order to recover the initial conditions of all settings, the contents of the memory are reset before shipment. This reset process involves actions in regard to the memory of signal modes. Therefore, these actions should be taken after the completion of all electrical inspection and display inspection.

1) Enter an input of Signal 26 through D-SUB input port. Operate the OSD to enter the sub-OSD of MISC.
2) Adjust the cursor to RECALL by using the +up and -down buttons, then press the MENU button.
3) When the OSD is displaying DONE following the word of RECALL, the resetting process has been finished. Keep pressing the MENU button for a while to exit and disappear the OSD.

2. External inspection on the LCD module

2.1 External inspection of the display surface

The display surface shall be visually inspected according to the inspection items specified below. In cases of the discovery of extreme defects or doubtful judgment, final judgment should be made on the basis of relevant detailed standards for inspection.

Unless otherwise specified, the inspection signals shall be used at the timing of Signal 25 specified in Paragraph 1.2.8 herein. However, the inspection screen shall be arranged according to the “Instructions 1) to 5) of the Inspection Standard” set forth in Paragraph 2.1.2 (1).

2.1.1 Inspection items

1) Examination of the missing of lines (horizontal or vertical lines failing to be displayed).
2) Presence of extreme missing of dots (bright dots and black dots), or conspicuous ones.
3) Presence of extreme flaws, wrinkles, air bubble, dents, lint, foreign matter, and conspicuous abnormality on the display surface.

2.1.2 Inspection standards

Inspection standards for external appearance and display conditions

(1) Inspection standards

Use a fluorescent lamp of 20w1 (for the inspection of external appearance) or the display plane illuminance of 40 to 200lx (for the inspection of display conditions). Secure a distance of 35cm between the eyes and the sample, and that of 20 to 30cm between the fluorescent lamp and the sample. Under the above-mentioned conditions or better, inspections shall be carried out in the direction specified below.

A: Angle of visibility for inspection (Right and left: 30°/Up and down: 20° to 0°)

The direction of application shall be recorded in the column of direction. Inspection shall be carried out at a room temperature of 25 ± 5°C.

The following screen shall be used for the inspection.

1) All black or gray in 3 gradations
2) 15-gradation dot checkers (R,G,B in single color each)
3) 15-gradation dot checkers reversal screen
4) All red, all green, or all blue screen in solid color each
5) All white solid screen

(2) Standards for display conditions and external appearance inspection

Standard for errors (defects)

No	Item description				Standard	Remark
1	Dot defect	Bright		1 dot (R/G/B)	N≤4	1. Test pattern : Full white or Full black. 2. Slight bright & dark dot do not seen in 50% gray pattern is ignored. 3. “2 dots adjacent” means the 2 sub-pixels in 2 adjacent pixels or single pixel 4. See (Note 1) for detailed definition of 2 dots adjacent. 5. 2 dots adjacent defect is accounted as 1 defect. 6. Distance : (Note 2)
				2 dots adjacent	≤1	
				≥3 dots	N=0	
				Total	N≤4	
		Black		1 dot	N≤5	
				2 dots Adjacent	N≤2	
				≥3 dots	N=0	
				Total	N≤5	
		Distance (mm)			≥15	
		Total (Bright and/ or black)		Sub-pixel	N≤6	
				Pairs	N≤2	
2	Black/white spot, (Foreign circular matter) (mm)			D≤0.15	Ignore	
				0.15<D≤0.5	N≤2	
				D>0.5	N=0	
3	Scratch on polarizer, line shape (mm)		W≤0.01	L: ignore	Ignore	
			0.01<W≤0.05	L≤10	N≤ 4	
			W＞0.05		N=0	
4	Lints, black/white line by foreign particles (mm)		W≤0.01		Ignore	
			0.01<W≤0.05	L≤2	N≤3	
			W>0.05	L>2	N=0	
5	Dent on polarizer, dot shape (mm)		D≤0.2		Ignore	
			0.2<D≤0.4		N≤4	
			D>0.4		N=0	
6	Bubbles, peeling in polarizer (mm)		D≤0.2		Ignore	
			0.2<D≤0.5		N≤4	
			D>0.5		N=0	
7	Light leakage by foreign articles (mm)		D≤0.2		Ignore	
			0.2<D≤0.5		N≤4	
			D>0.5		N=0	
8	Back Light		Lamp defect		It’s not allowed	
			Pollution		It’s not allowed	
			Leakage		By 8% ND filter	Invisible; (Note 3, 4)

No	Content		FLC48SXC8V Specification (FJ)	Remarks
9	Mura (mm)	Clear mura (with clear border)	By 8% ND filter	(1)Test pattern : Full black/full white/50% gray (2)Invisible, (Note 3, 4)
		Unclear mura (with unclear border)	By 8% ND filter	
		Light or dark hor. & Vertical bands	By 8% ND filter	
10	White dot spots		By 8% ND filter	Invisible
11	RGB segment defect		It is not allowed	
12	Vertical or horizontal line(s) defect		It is not allowed	
13	Light bands defect		It is not allowed	
14	Over shoot (RGB)		It is not allowed	
15	Tab defect (Black strip with no image)		It is not allowed	
16	Block noise		It is not allowed	
17	White or black screen (no video)		It is not allowed	
18	Screen break		It is not allowed	
19	Panel noise (Twinkling)		It is not allowed	
20	Newton ring number		N= 0	
21	Rubbing mark		Rubbingless	
22	Mottling (Non-uniformity or mura)		By 8% ND filter	Invisible; (Note 3, 4)
23	Dim line (Vth shift line)		By 8% ND filter	Invisible; (Note 3, 4)
24	Line defective		N=0	Pattern: Black, white
25	Fungus (mm)		By 8% ND filter	Invisible; Pattern: 50% gray

Note 1 : Detailed definition of 2 dots adjacent is as follows.

Dot defect distance category is not applied to the dot defects categorized in 2 dots adjacent.



Both Horizontal and Vertical are allowed

Note 2 : Definition of Defective distance is as follows. Defective distance is specified among bright dots and among dark dots each, as bright dot and dark dot are not seen at the same screen.

Note 3 : How to use 8% ND filter.

A: Measurement

(1) The distance between LCD with ND filter : 3 cm

(2) The viewing distance between LCD with inspector : 35 cm

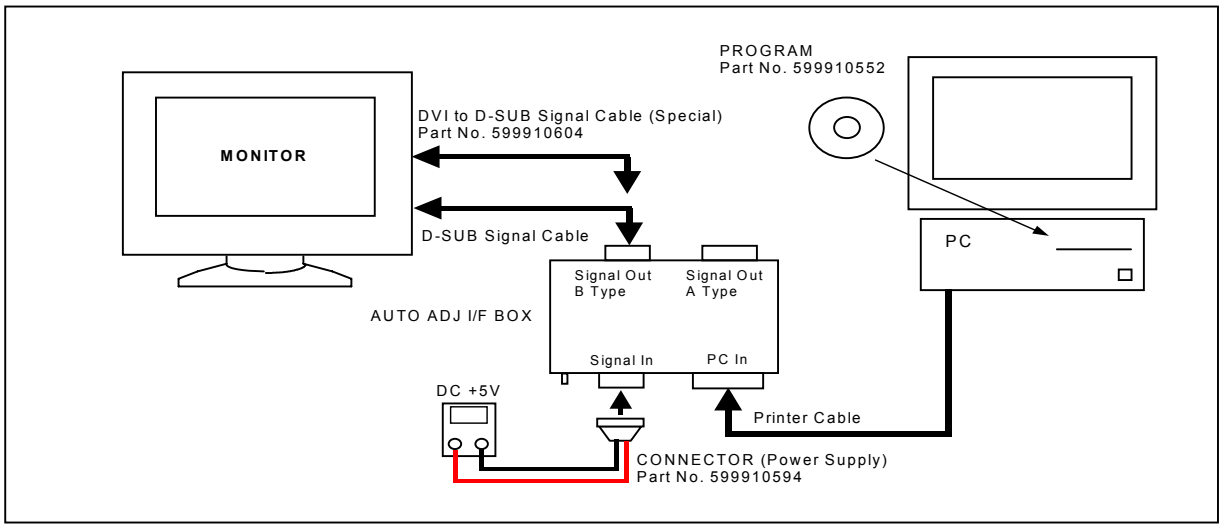
B: Criteria : Invisible

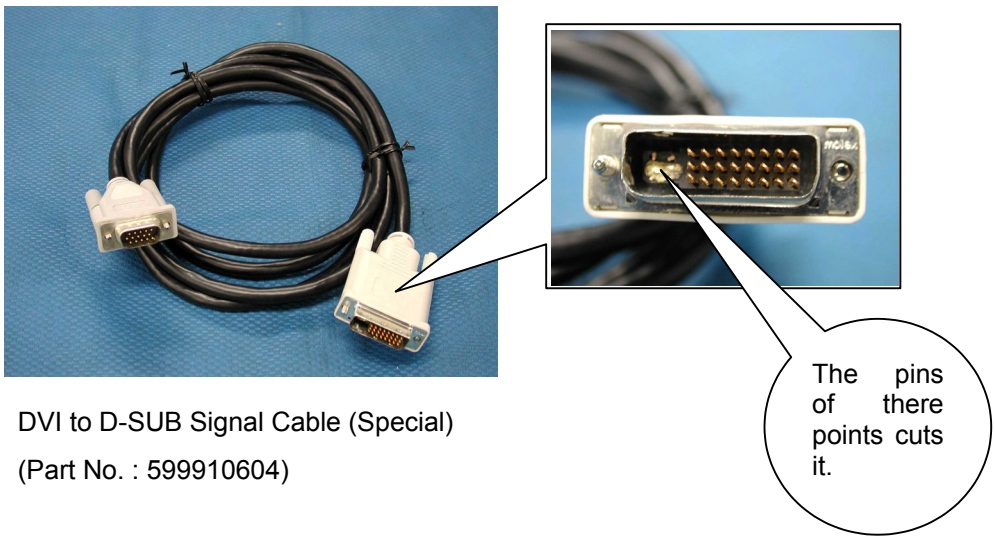
Note 4 : Note 5 also use for ViewSonic 8%ND filter Mura judgement.

3. Inspection of PLUG & PLAY communication and OSD for model name/ serial number

3.1 System Connection

This system should be connected as shown below.





DVI to D-SUB Signal Cable (Special)

(Part No. : 599910604)

3.2 Input Signal

Horizontal sync frequency: Not specified.

Vertical sync frequency: Not specified.

Because a writing equipment is in the signal-less condition at the time of EDID data writing, OSD of "NO Signal" is indicated on the screen.

3.3 Operational procedures

1. Start PNP.EXE from DOS mode or the Windows DOS prompt.
2. Operation key assignment
   • Determine the operation mode with the F1 ~ F9 and ESC keys.

   F1: Setting file changeover for respective models

   F4: EDID data for reading

   F5: D-SUB connector (Analog) for writing (EDID data)

   F8: DVI-D connector (Digital) for writing (EDID data)

   F9: D-SUB (Analog) and D-VI-D (Digital) for writing (Write ALL)

   ESC: End of program
3. Press the F1 key and enter an input of setting file for the related model. Press the Enter key.

File name	Model
08EA1AAF	LCD1920NX

4. Writing and inspection procedures

   In this section, explanations are given in regard to an example of procedures used for the writing and inspection of all items.

   a. The D-SUB connector terminal of the writing equipment and AUTO ADJ I/F BOX are connected with the D-SUB signal cable.

   b. Press the F9 key (write ALL).

   c. Since the screen is changed over to the one that waits for an input of serial number, examine the serial number of the set, enter it from the keyboard, and press the Enter key.

   The message of the screen:

   Model Name "LCD1920NX"
   Input serial number (Enter only: Use previous number)

   d. EDID data writing for the D-SUB (ANALOG)

   When the Enter key is pressed, the EDID data of the D-SUB (ANALOG) are written.

   The message of the screen:

   Input 1 File 1 set N/A (Hit any key)

   e. EDID data writing for the DVI-D (DIGITAL)

   The DVI-D connector terminal of the writing device and AUTO ADJ I/F BOX are connected with the DVI to D-SUB Signal Cable (Special).

   When the Enter key is pressed, the EDID data of the DVI-D (DIGITAL) are written.

   The message of the screen:

   Input 2 File 2 set N/A (Hit any key)

f. Upon normal completion, a screen display is presented "OK".

g. A power-supply switch is switched off -> turned on, A signal generator (There is no designation in the input signal.) and a writing equipment are connected with the D-SUB signal cable directly.

h. Display “INFORMATION” of the OSD, and confirm that the model name (LCD1920NX) and serial number have been correctly written.

3.4 EDID data file

The EDID data file text is shown below. When you write or inspect EDID for this monitor, the following table can be used.

file name : EDID-208.TXT

EDID-208 (Analog)

	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**A**	**B**	**C**	**D**	**E**	**F**
00	00	FF	FF	FF	FF	FF	FF	00	38	A3	DE	65	01	01	01	01
10	10 *1)	0C *2)	01	03	0E	26	1E	8C	EA	2C	95	A6	58	4A	9A	26
20	21	50	54	BF	EF	80	71	4F	81	80	01	01	01	01	01	01
30	01	01	01	01	01	01	30	2A	00	98	51	00	2A	40	30	70
40	13	00	78	2D	11	00	00	1E	00	00	00	FD	00	32	4B	1E
50	52	0E	00	0A	20	20	20	20	20	20	00	00	00	FC	00	4E
60	45	43	20	4C	43	44	31	39	32	30	4E	58	00	00	00	FF
70	00	32 *3)	34	30	30	30	30	31	51	41	0A	20	20	20	00	F4 *4)

Table 1 Data list (Management number : EDID-208)

file name : EDID-209.TXT

EDID-209 (Digital)

	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**A**	**B**	**C**	**D**	**E**	**F**
00	00	FF	FF	FF	FF	FF	FF	00	38	A3	DE	65	01	01	01	01
10	10 *1)	0C *2)	01	03	80	26	1E	8C	EA	2C	95	A6	58	4A	9A	26
20	21	50	54	BF	EF	80	71	4F	81	80	01	01	01	01	01	01
30	01	01	01	01	01	01	30	2A	00	98	51	00	2A	40	30	70
40	13	00	78	2D	11	00	00	1E	00	00	00	FD	00	32	4B	1E
50	52	0E	00	0A	20	20	20	20	20	20	00	00	00	FC	00	4E
60	45	43	20	4C	43	44	31	39	32	30	4E	58	00	00	00	FF
70	00	32 *3)	34	30	30	30	30	31	51	41	0A	20	20	20	00	82 *4)

Table 2 Data list (Management number : EDID-209)

Note 1: address 10h — Week of manufacture = Month of manufacture × 4

Note 2: address 11h — Year of manufacture - 1990

Note 3: address 71h ~ 7Dh — Serial Number (ASCII coded)
If less than 13 char, terminate with 0Ah and fill the rests with 20h.

Note 4: address 7Fh — Checksum
The sum of entire 128 byte shall be equal to 00h.

TROUBLE SHOOTING

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Note

Prior to the diagnostic servicing for troubleshooting, the following items should be examined to confirm the freedom from abnormality:

(1) Power supply voltage: 100 to 240VAC

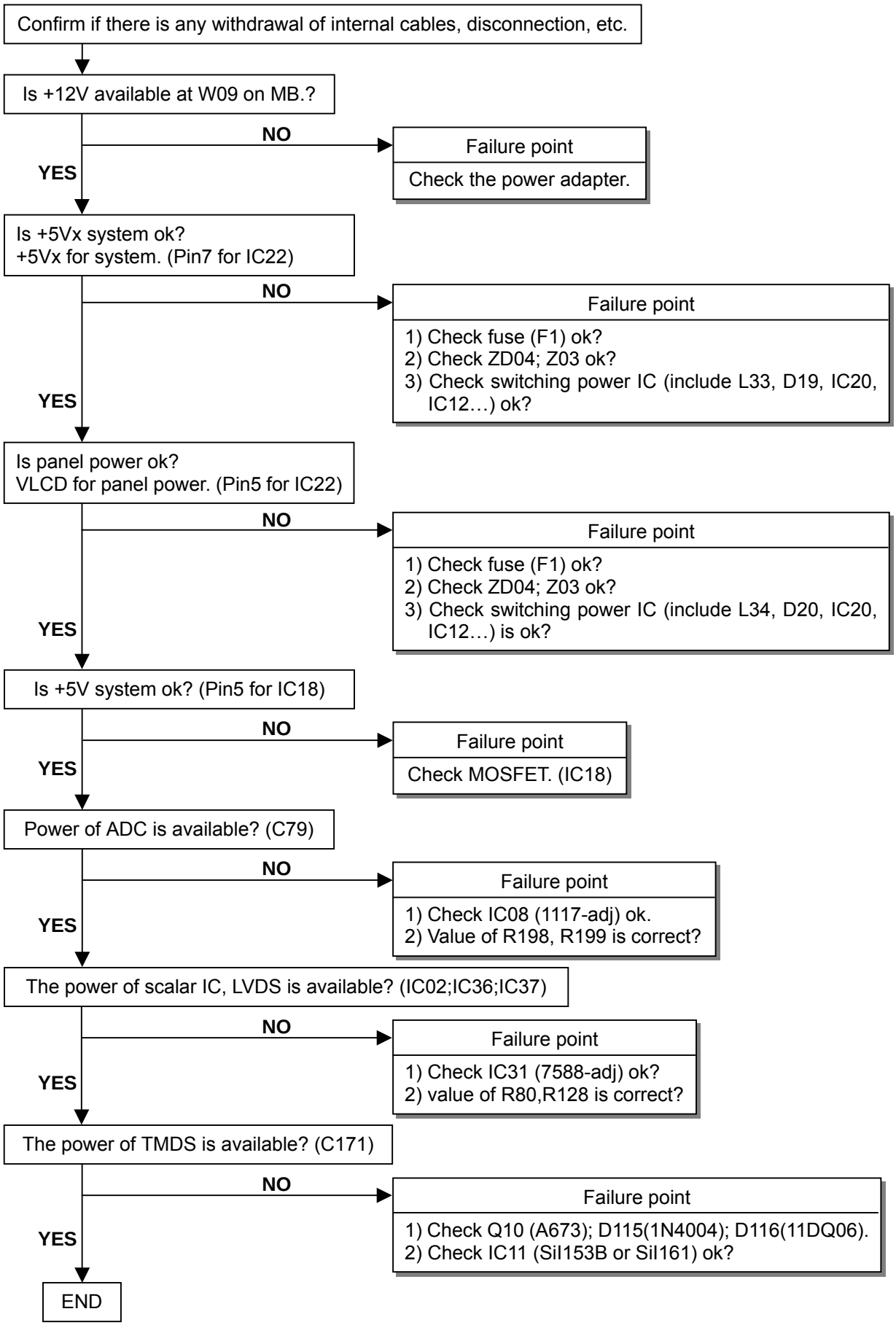
(2) Input signal: 1280 x 1024 (60Hz), recommended (Separate)

A: Analog D-SUB input	RGB 0.7Vp-p (when terminated with 75Ω)
Display pattern	Display not in black

(3) All connectors shall be correctly connected in the unit.

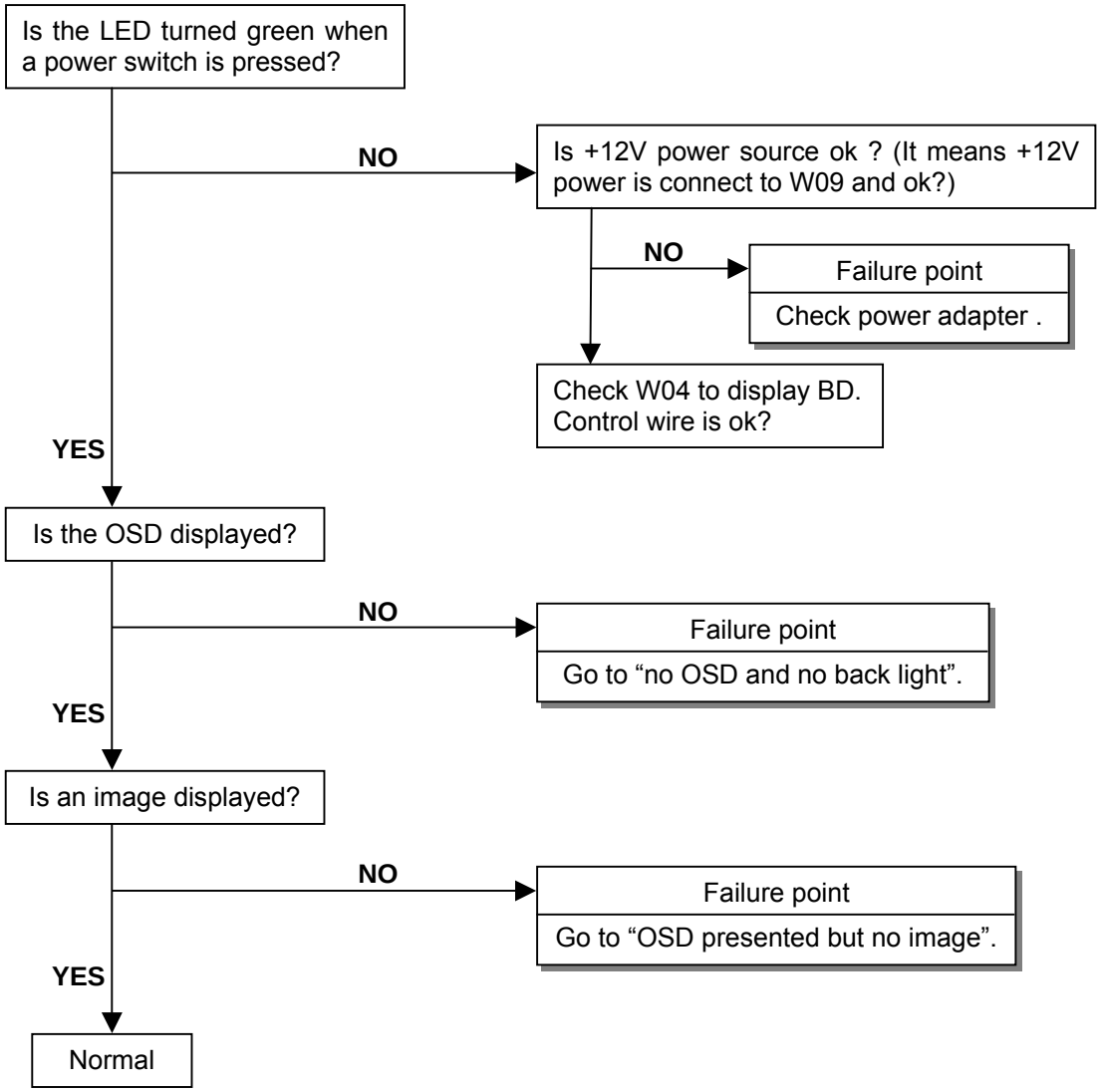
< Explanations below are based on the analog D-SUB input.>

1. POWER is not available

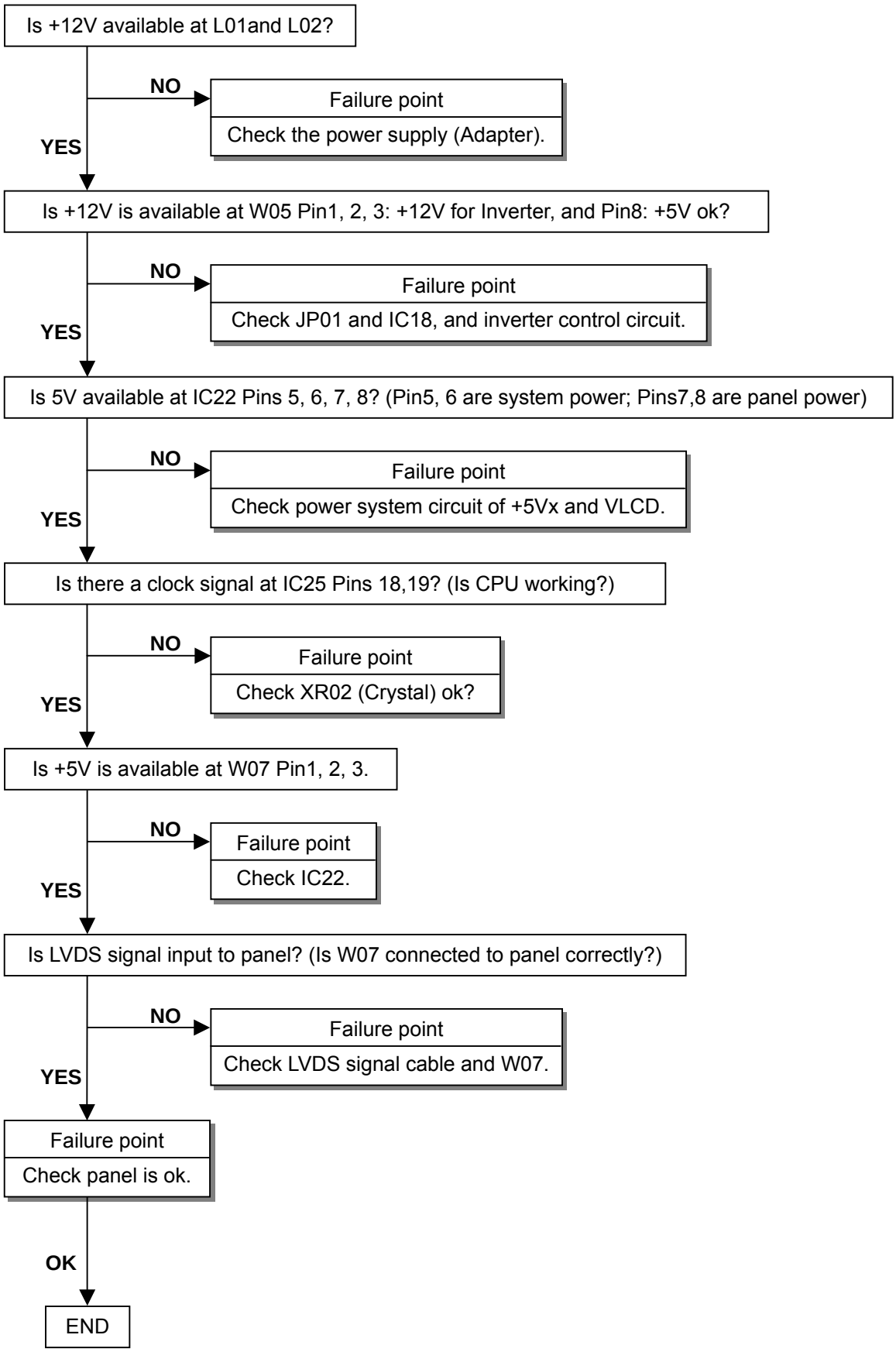


2. No image display

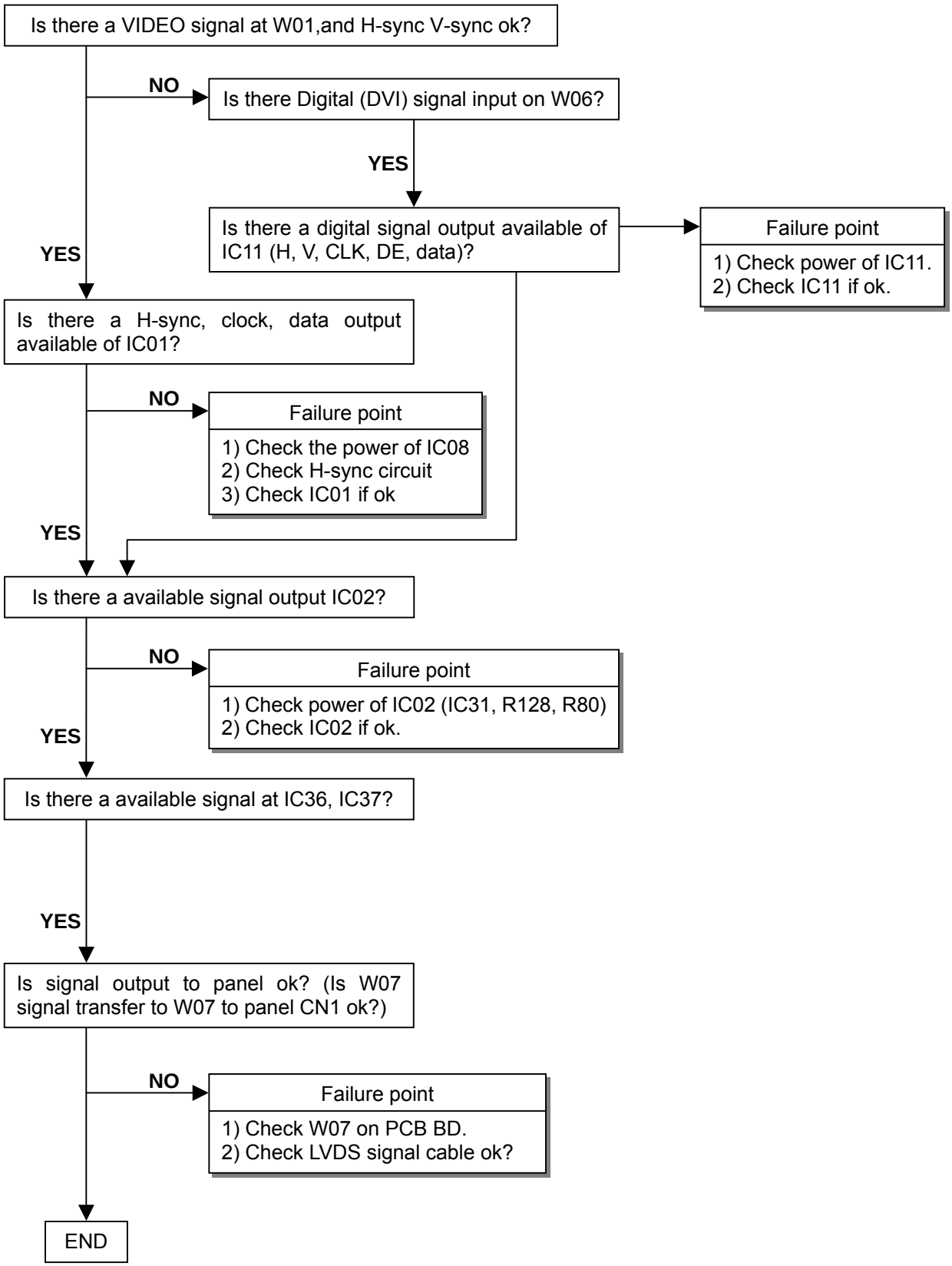
2.1 LED green, but no OSD, no back light and no image



2.2 LED green, and no OSD and no back light

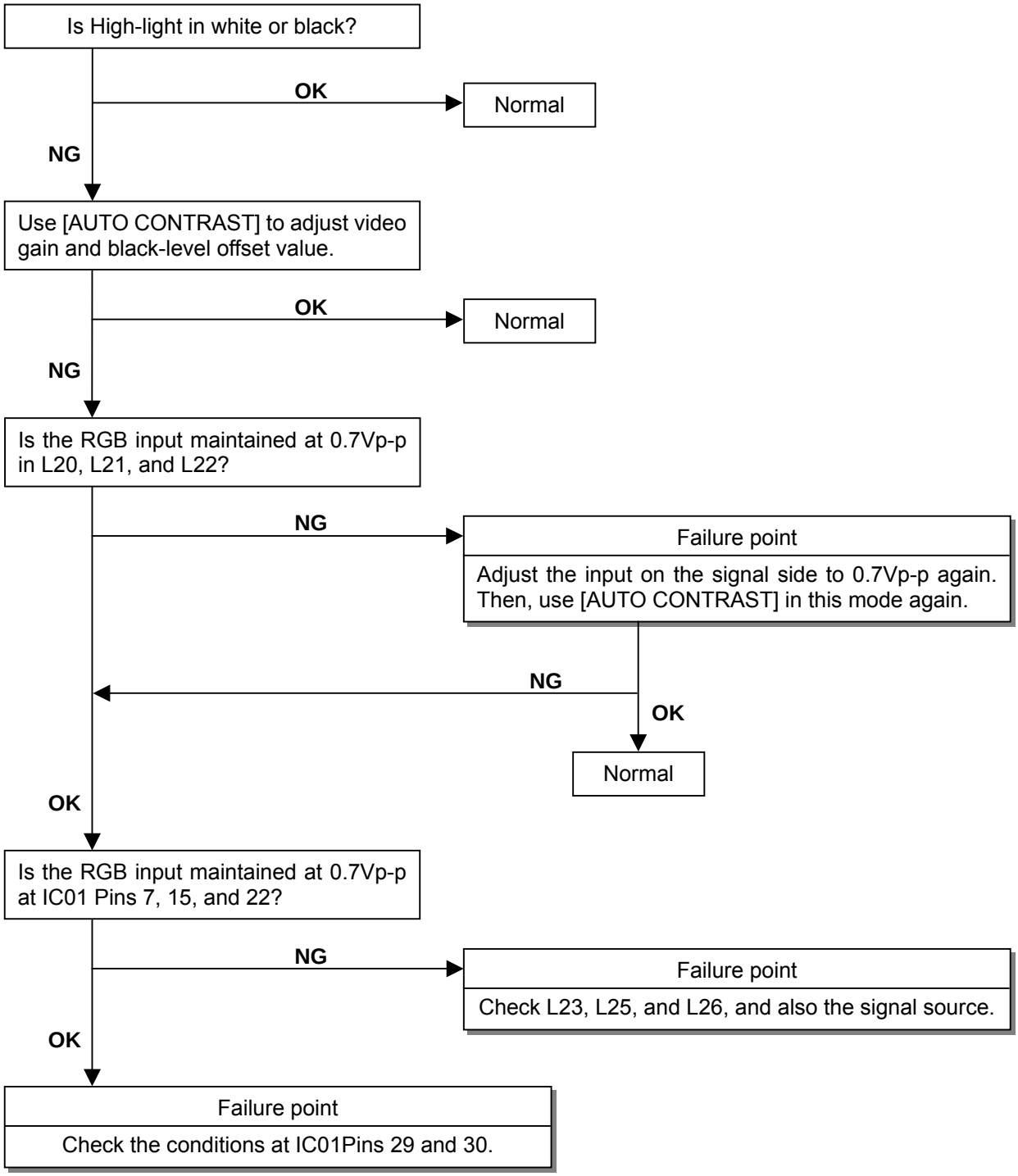


2.3 LED green, and OSD present, but no image

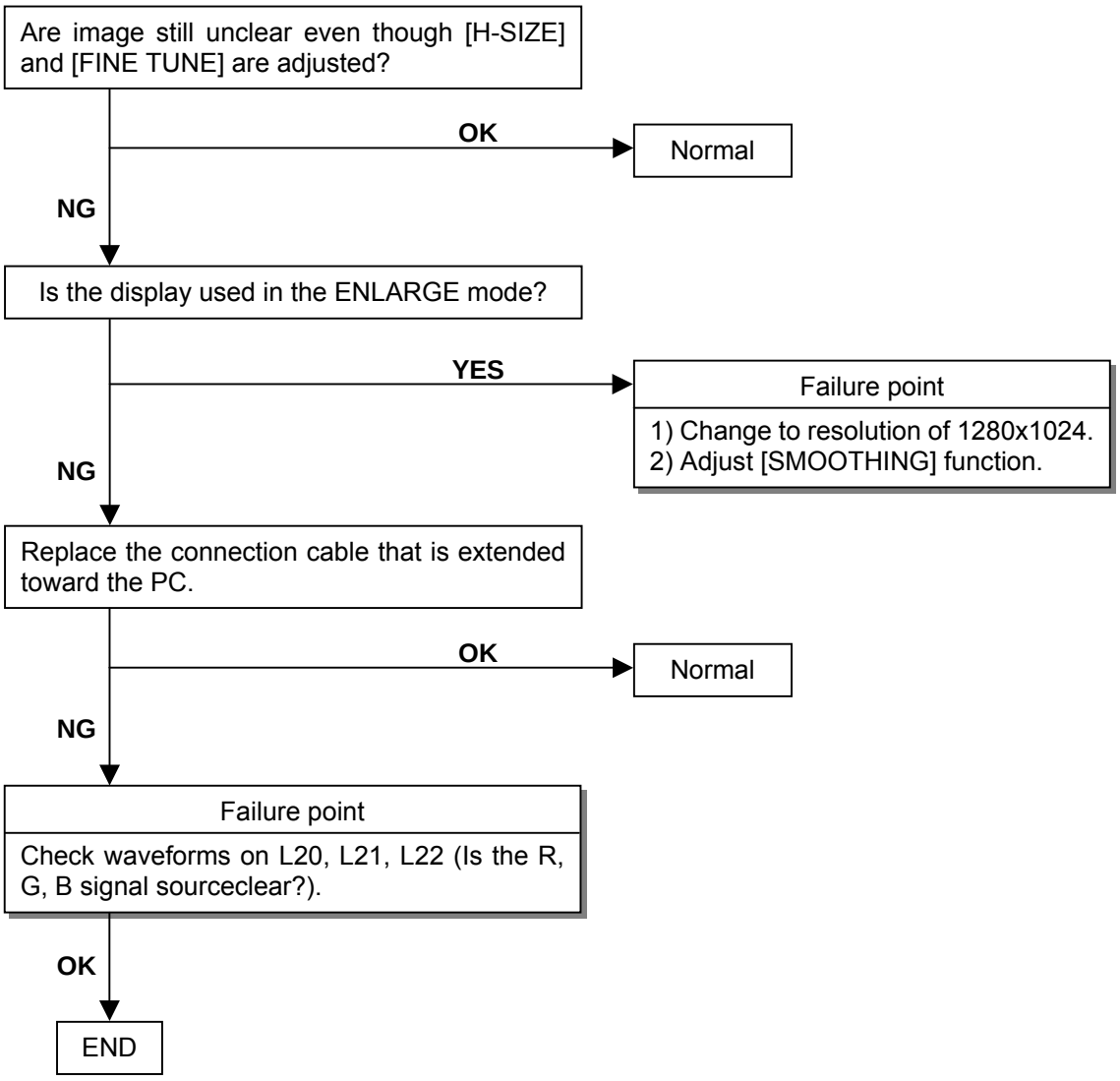


3. Picture errors

3.1 High-light in white or black

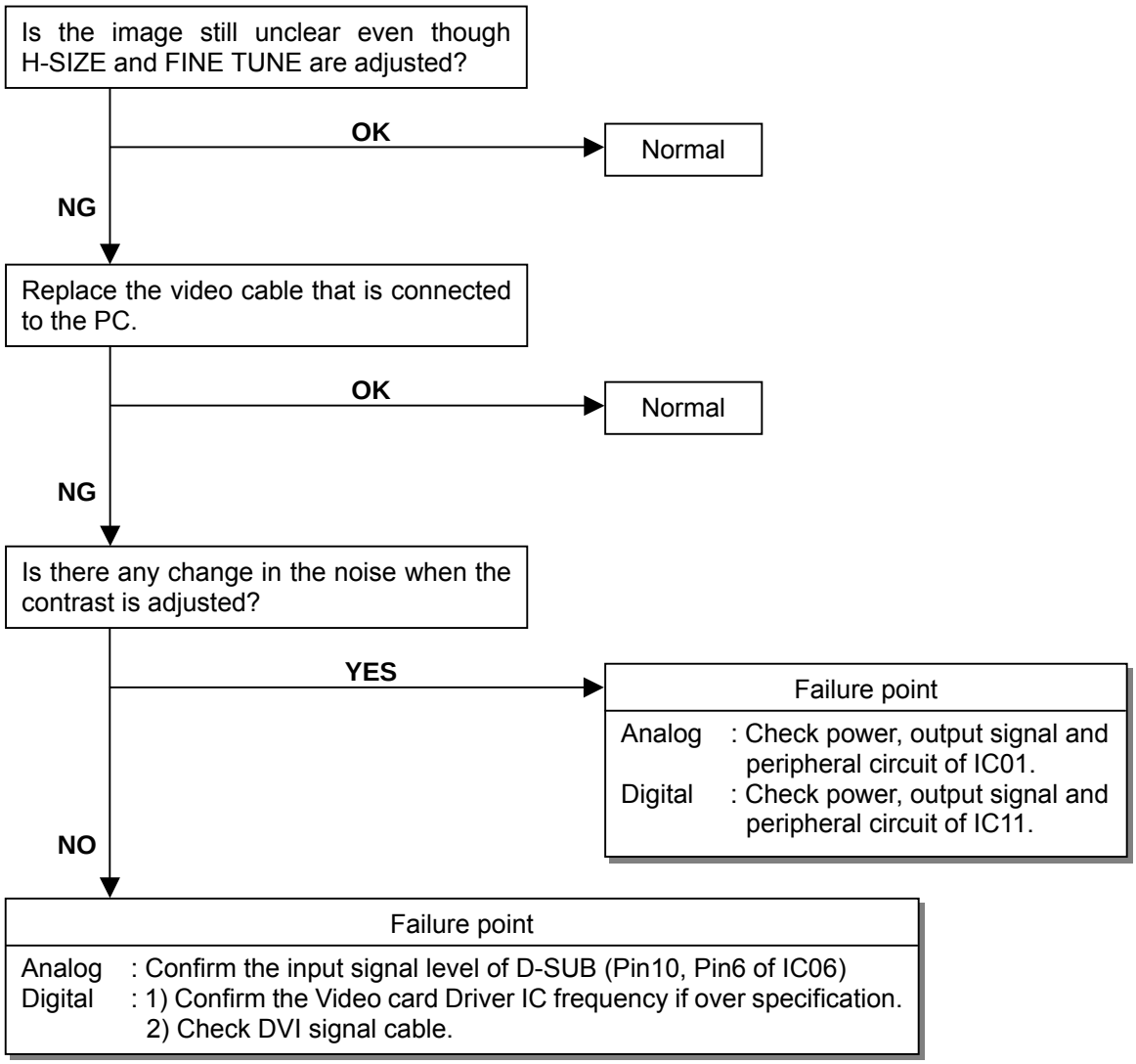


3.2 Image is unclear



* For the auto-sync processing of H/V-POSITION, H-SIZE, and FINE TUNE, it is necessary to use images in the outermost periphery of the video activity area. During adjustments, use images of full-screen display by WINDOWS.

3.3 Image noise



4. Others operational error

4.1 DDC read error

1) D-SUB

- Check the power supply for IC26.
- Check the clock signal waveform at Pin 6 of IC26 and the data waveform at Pin 5.

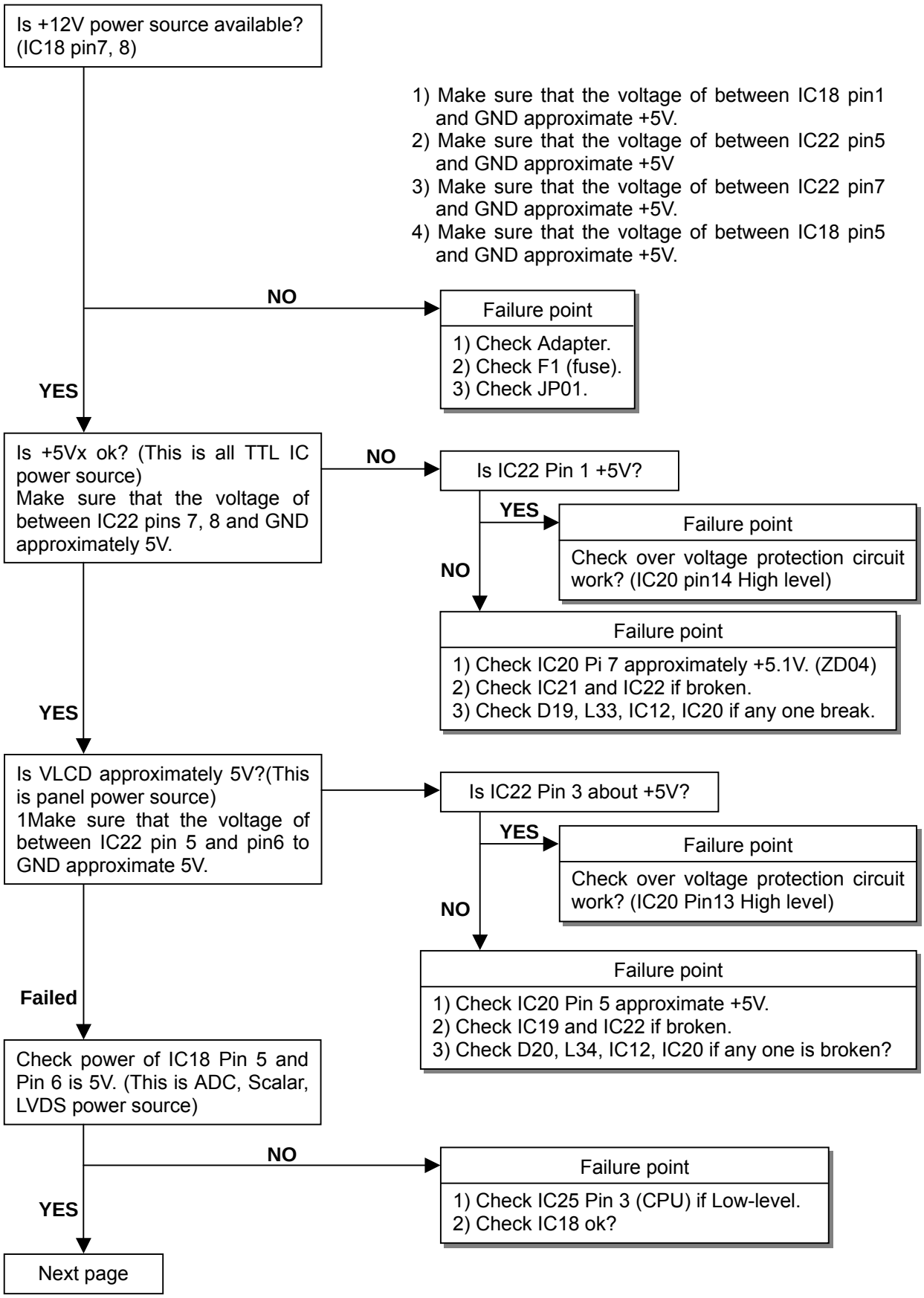
2) DVI

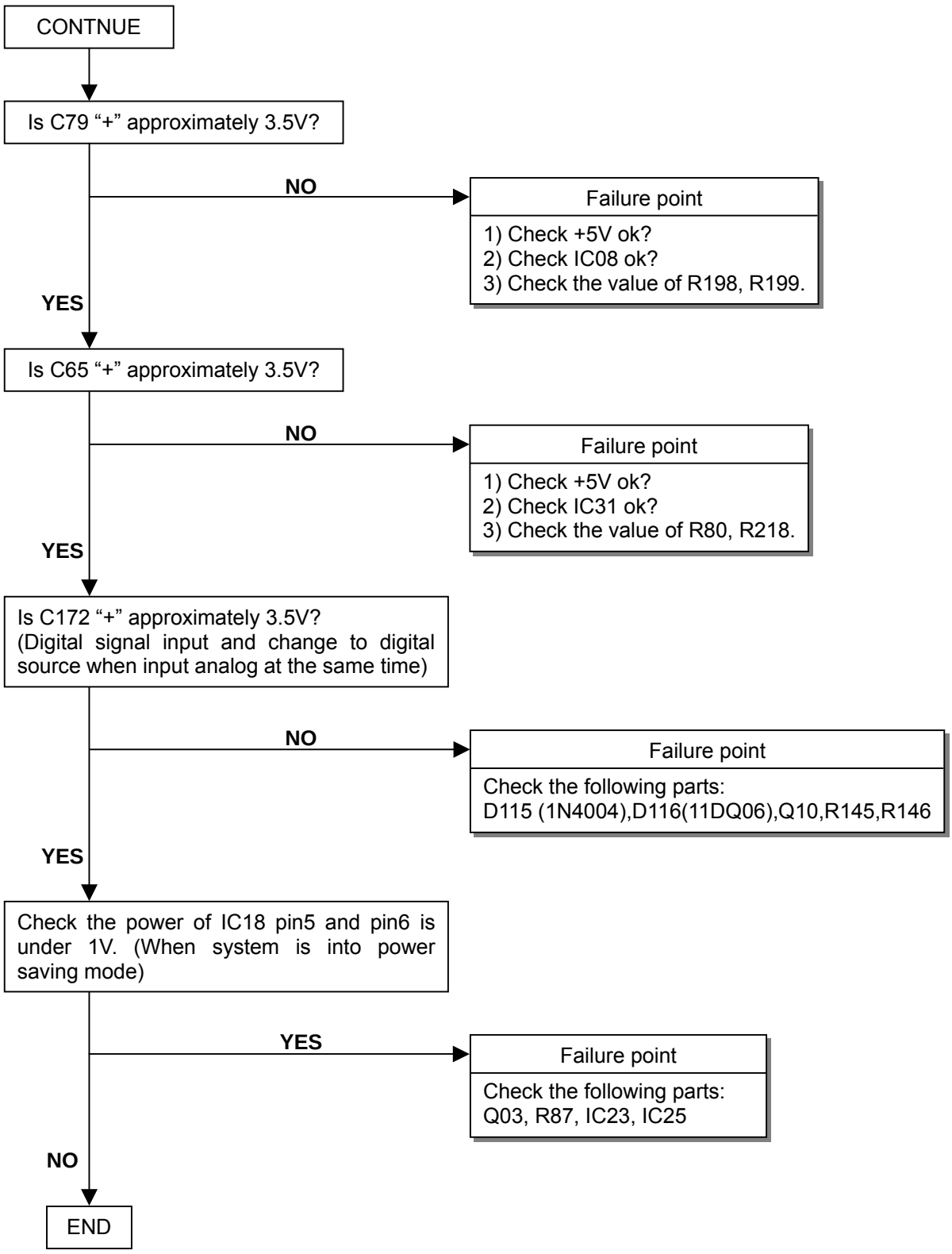
- Check the power supply for IC14(24C02).
- Check the clock signal waveform at IC14 Pin 6 and the data waveform at Pin 5.

4.2 Back light malfunction

- Check for loose cabbles, if any.
- Is 12V available at W05 Pins1, 2, 3?
- Is W05 Pin 8 maintained at 4.5V or above, and Pin7 at 0~5V ? If there is still no lighting even though the above-mentioned voltages are maintained, then the inverter PCB is considered to be out of order.

5. Switching power circuit failure




CONTNUE
Is C79 “+” approximately 3.5V?
NO
Failure point
1) Check +5V ok?
2) Check IC08 ok?
3) Check the value of R198, R199.
YES
Is C65 “+” approximately 3.5V?
NO
Failure point
1) Check +5V ok?
2) Check IC31 ok?
3) Check the value of R80, R218.
YES
Is C172 “+” approximately 3.5V?
(Digital signal input and change to digital source when input analog at the same time)
NO
Failure point
Check the following parts:
D115 (1N4004),D116(11DQ06),Q10,R145,R146
YES
Check the power of IC18 pin5 and pin6 is under 1V. (When system is into power saving mode)
YES
Failure point
Check the following parts:
Q03, R87, IC23, IC25
NO
END

CIRCUIT DESCRIPTION

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1.Summary

LCD1920NX is a dual input, multi-frequency and multi mode color TFT LCD monitor. It supports different resolutions including SXGA, XGA, SVGA, VGA and other various high-resolution modes up to 1280x1024 for IBM, PC compatibles, Power PC and Macintosh. LCD1920NX uses a TFT LCD panel with a 0.294mm pixel pitch, providing 16.7 million color image.

As the previous block diagram illustrates, LCD1920NX uses the Analog/Digital Interface Controller (IC02) ASIC for mode detection and resolution scaling from its preset values. Digital input we use SiL 153B (IC11). To extract TMDS link. The purpose of the two set of PLL is to provide the clock from multiple horizontal synchronous frequencies. The AD9884 (IC01), include PLL1 and A/D converters sample clock. PLL2 produces the LCD panel's pixel clock with the TLC2933 (IC03).

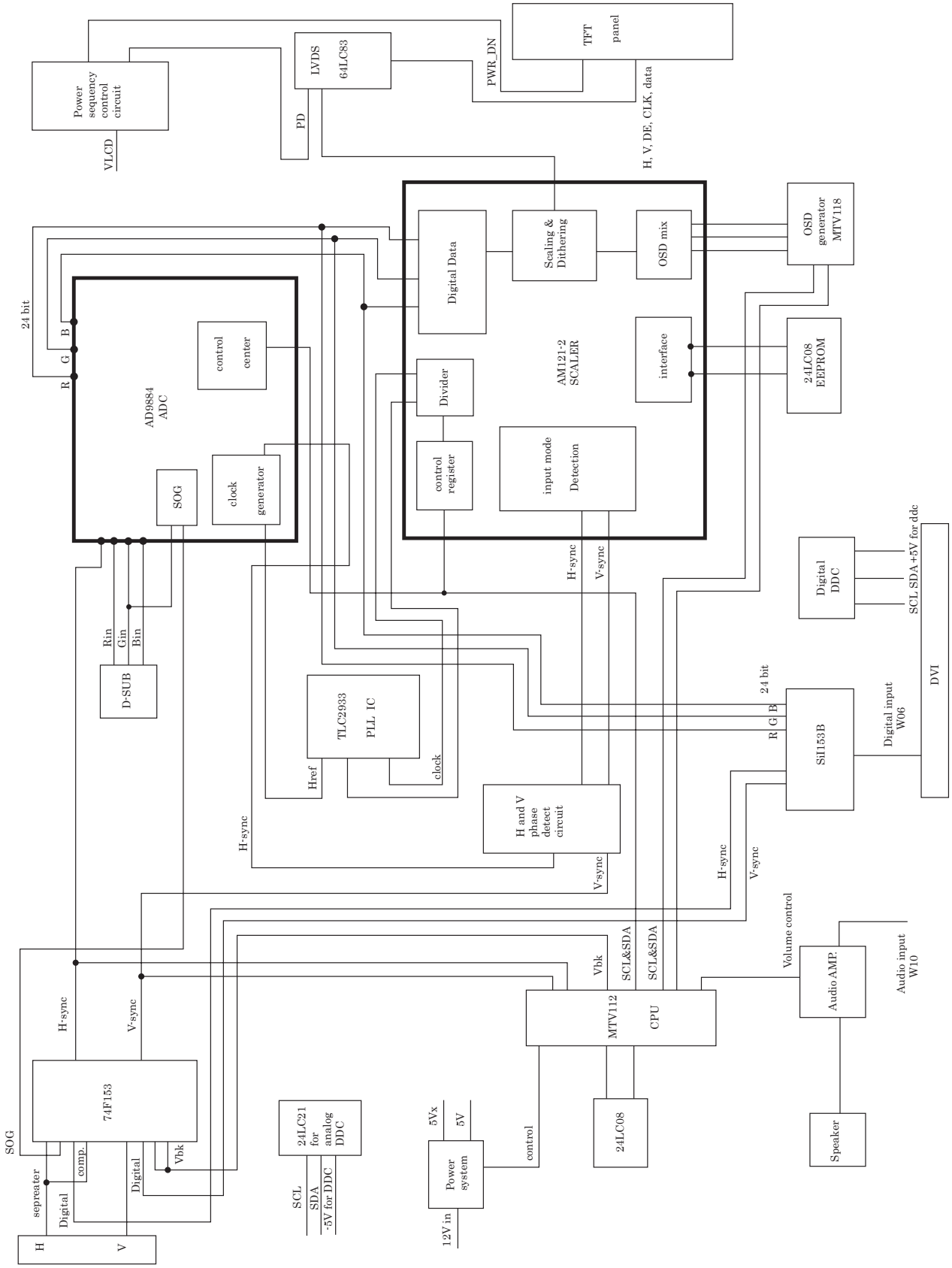
Furthermore, each TFT LCD monitor uses the 24LC21 (IC26) chip to provide DDC2B™ with Analog Plug & Play, 24C02 (IC14) for digital interface Plug & Play. The DDC data format is EDID v1.3.

Upon receiving video signal input, the Analog Interface Controller (Digital Process and Control System) will trigger the mode detection function such that the internal controls can use the ROM preset information to drive the Analog Interface Controller. In addition, the preset values can determine A/D converter clock; LCD pixel clock; line buffer input/output rate; V-Sync and H-Sync pulse width; back porch and front porch to provide optimal performance for the TFT LCD monitors.

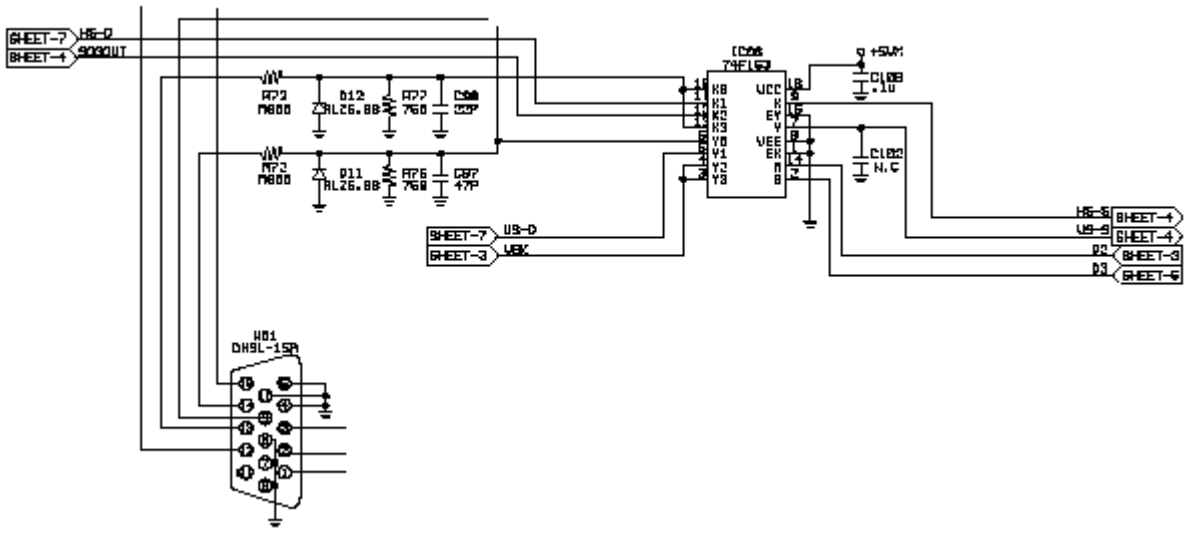
Digital process and control system allows uses to control OSM menu values to change monitor setting that includes Auto-SYNC , AUTO-CONTRAST, brightness, contrast, color adjust, H/V position and H size. The following sections are a breakdown of the TFT LCD display control boards major section.

2. Circuit description

2.1 System block diagram



2.2 Analog signal input circuit



This product uses 74F153 as a signal switch in order to support composite SYNC and SYNC on Green timings. The MPU (IC25) in this product provides the differential function to the Composite SYNC, so the SYNC processor circuit is simplified. The free run function in this product also make user to easily know the input signal is out of product specification or interrupted. When separat SYNC is detected through the V-in and H-in, MPU will set both the H-select and V-select will be X0, Y0 and MPU select digital interface will set IC06 X1, Y1 and MPU select SYNC on Green H-Sync set to X2, V-Sync set to Y2, when composite is select X3, Y3.

V-composite is the vertical sync separated from the composite sync through MPU. And IC01 (AD9884) extracts H-Sync from Green. On the other hand, external system read IC26 EDID data by SDA and SCL buses.

Signal switch of IC06(74F153)		MPU detect mode
A	B	
L	L	Separator
L	H	Digital
H	L	Sync on green
H	H	Composite

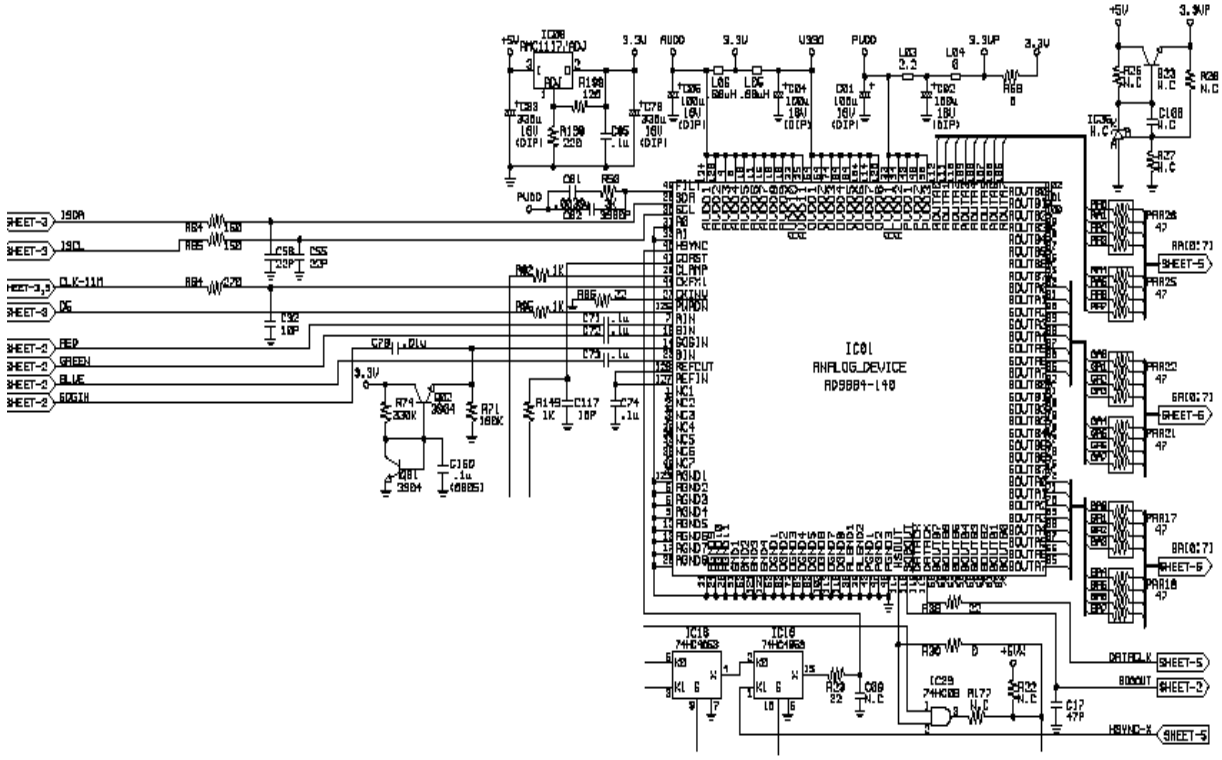
2.3 A/D converter

The A/D converter (IC01) is used to convert the RGB video signals of about 0.7Vp-p into the digital signals of odd-numbered and even-numbered pixels of 8 bits each, 48 bits in total. In regard to the clocks for conversion into digital signals, the built-in PLL is used to generate the clock signals inside the IC01, based on the horizontal sync signal.

The video signal passes through the built-in pre-amplifier, and is then A/D-converted by the sampling clock signal generated from the above-mentioned PLL circuit.

The registers intended for the setting of the clamp level and the pre-amplifier gain are controlled through the IIC bus of Pins 29 to 30. C81, C82, and R50 connected to Pin 45 are used to compose a loop filter intended to generate the PLL clock signals. If this section becomes out of order, it is impossible to accomplish normal reproduction of images.

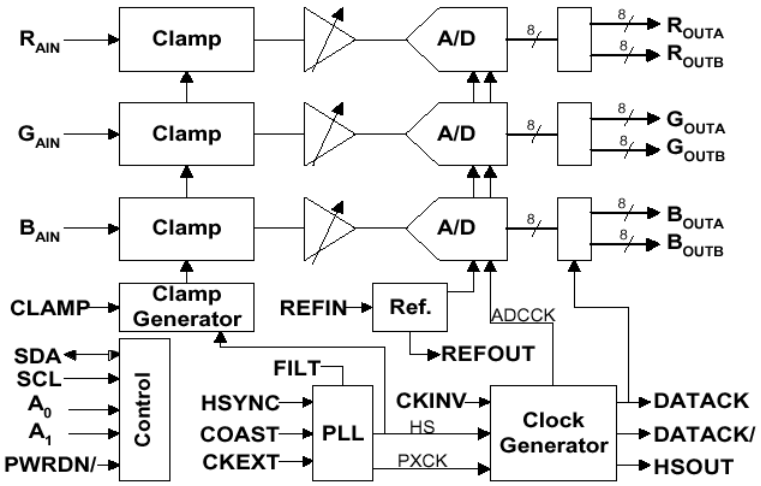
During the entry of the SOG input and the composite sync input, the vertical blanking period and the PLL circuit are held by the coast signal input fed from Pin 41. If this signal is not available, the clock frequency is changed during the vertical period and a curve may be produced at the upper part of the screen.



The AD9884 is a complete 8-bit 140MSPS, monolithic graphics digitizer optimized for digitizing RGB graphics signals from personal computers and workstations. Its 140MSPS encode rate capability and full-power analog bandwidth of 500MHz supports display resolutions of up to 1280x1024 at 75Hz with sufficient input bandwidth to accurately acquire and digitize each pixel. To minimize system cost and power dissipation, the AD9884 includes +1.25V reference, PLL to generate a pixel clock from HSYNC and COAST, and programmable gains, offset, and clamp control. The user provides only a +3.3V power supply, analog input, and HSYNC and COAST signals. Three-state CMOS outputs may be powered from 2.5V to 3.3V.

The AD9884's on-chip PLL generates a pixel clock from HSYNC and COAST inputs. Pixel clock output frequencies range from 20 to 140MHz. PLL clock jitters is 500ps p-p typical relative to the input reference. When the COAST signal is presented, the PLL maintain its output frequency in the absence of HSYNC. A sampling phase adjustment is provided. Data, HSYNC and Clock output phase relationships are maintained. The PLL can be disabled and external clock input provided as the pixel clock.

A clamp signal is generated internally or may be provided by the user through the CLAMP input pin. This device is fully programmable via a two wire serial port. Fabricated in an advanced CMOS process, the AD9884 is provided in a space-saving 128-lead MQFP surface mount plastic package and is specified over the 0°C to +85°C temperature range.



2.4 AM121-2and peripheral circuits

The AM121-2 is enhanced version of the AM100 chip. It is an IC designed for dual-interface SXGA TFT LCD monitors. A dual-interface LCD monitor takes analog or digital RGB signals from a personal computer graphics card. This feature makes a dual-interface LCD monitor.

2.4.1 General description

The analog input RGB signals are first sampled by six channels of the 8-bit A/D converter, and the 48-bit RGB data is then fed into AM121-2. For digital interface, the input data is first received by a TMDS receiver, and the 24/48 bit RGB output data of TMDS receiver is then fed into AM121-2. Without any manual adjustment, AM101 is capable of performing automatic detection of the display resolution and timing of input signals generated from various PC graphic cards. AM121-2 then automatically scales the input image to fill the full screen of the LCD monitor. AM121-2 can interface with TFT LCD panels from various manufacturers by generating either 24-bit or 48-bit RGB signal to the LCD panel based upon the timing parameters saved in the EEPROM.

The AM121-2 implements four advanced display technologies:

Advanced mode detection and auto-calibration without any external CPU assist

Advanced programmable interpolation algorithm

Stand-alone mode support, and

Advanced true color support with both dithering and frame modulation

The AM121-2 also provides distinguished system features to the TFT LCD monitor solution. The first one is “plug-and-play”, and the second one is “cost-effective system solution”. To be truly plug-and-display, the AM121-2 performs automatic input mode detection and auto phase calibration, so the LCD monitor can ensure that the A/D converters’ sample clock is precisely synchronized with the input video data, and to preserve the highest image bandwidth for the highest image quality. Furthermore, the AM121-2 can generate output video even when the input signal is beyond the specifications or no input signal is fed.

For “cost-effective system solution”, the AM121-2 implements many system support features such as OSM mixer, error status indicators, 2-wire serial interface for both EEPROM and host CPU interface. Another important contributing factor is that the AM121-2 does not require external frame buffer memory for the automatic image

2.4.2 AM121-2 internal block diagram

Input mode detection and auto calibration

AM121-2 can handle up to 14 different modes, it can automatically detect the mode and scaling.

Buffer memory and read/write control

The AM121-2 uses internal buffer memory to store a portion of the input image for image scaling and output synchronization.

Image scaling, interpolation and dithering

The AM121-2 supports both automatic image scaling and interpolation. It supports 16.7million true color for a 6-bit panel. Two dithering algorithms are implemented and users can chose between them through the external micro-controller.

OSM mixer and LCD interface

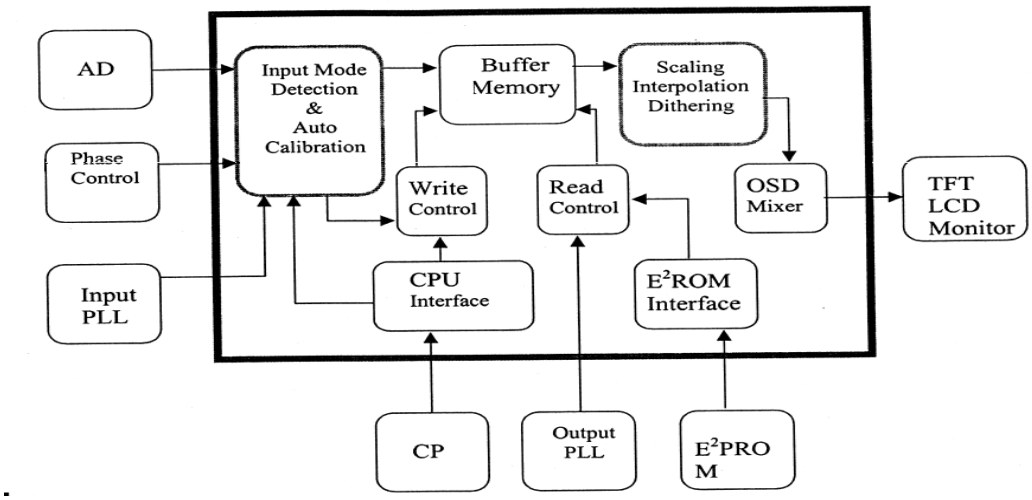
At the output stage, the AM121-2 performs the OSM mixer function, and then generates the 24-bit/48-bit RGB signal to the LCD panel with the correct timing.

EEPROM interface

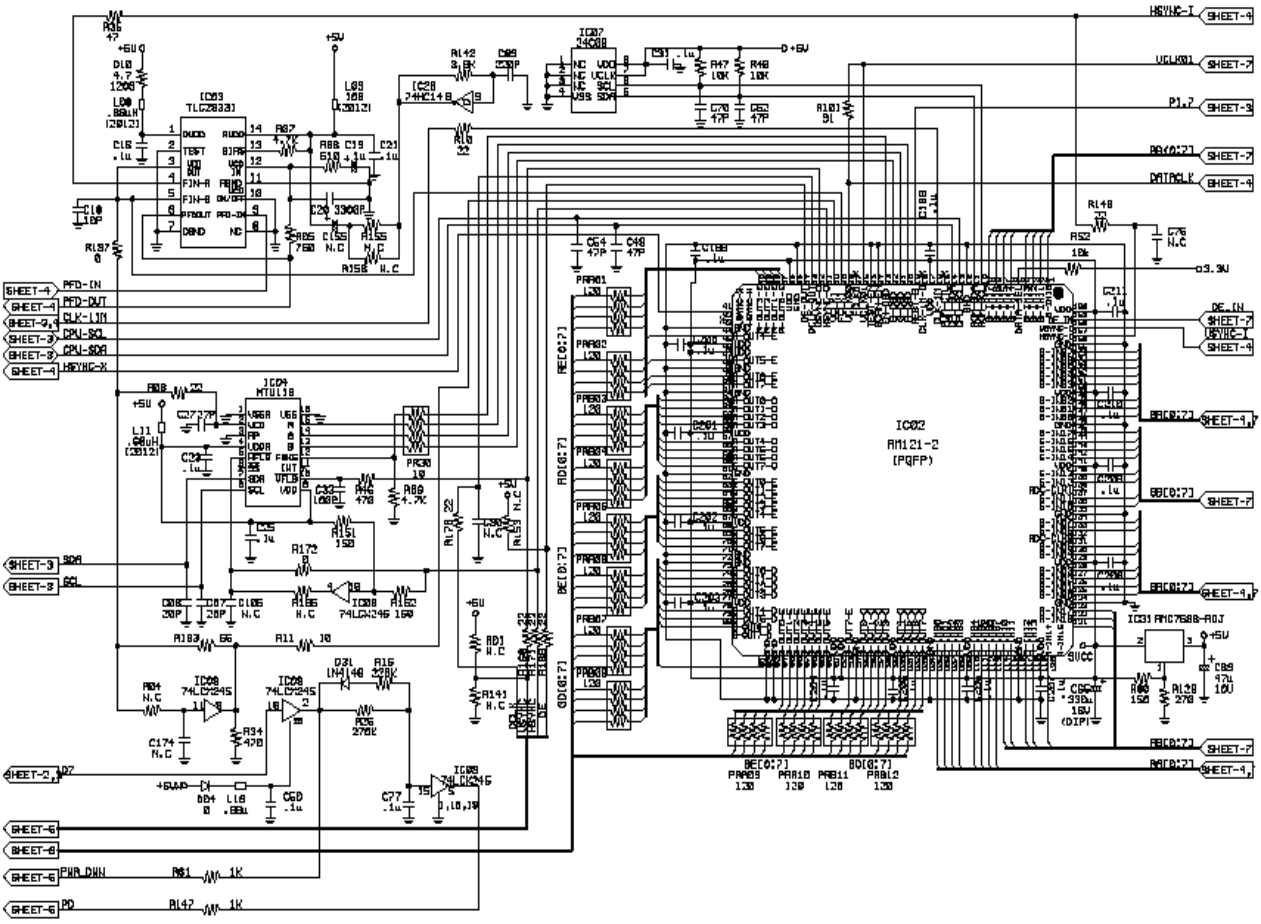
As mentioned in previous sections, the external EEPROM (IC07—24LC08) stores crucial information for the AM121-2 internal operations. The AM121-2 interfaces with the EEPROM through a 2-wire serial interface.

CPU interface

The Am121-2 supports a 2-wire serial interface to an external CPU. The interface allows the external CPU to access and modify control register inside the AM121-2.



2.4.3 Circuit diagram



2.4.4 Pin description

Symbol	Pin #	I/O	Description
B_IN10	1	I	Channel B Data Input Color Blue (LSB)
B_IN11	2	I	Channel B Data Input Color Blue
B_IN12	3	I	Channel B Data Input Color Blue
B_IN13	4	I	Channel B Data Input Color Blue
DATA_SEL	5	I	Indicate Channel A or Channel B contains valid input data: 1: data in Channel A is valid 0: data in Channel B is valid
B_IN14	6	I	Channel B Data Input Color Blue
B_IN15	7	I	Channel B Data Input Color Blue
B_IN16	8	I	Channel B Data Input Color Blue
B_IN17	9	I	Channel B Data Input Color Blue (MSB)
ROM_SCL	10	O	SCL in I^2C for EEPROM interface
ROM_SDA	11	I/O	SDA in I^2C for EEPROM interface
GND	12		Ground
CPU_SCL	13	I	SCL in I^2C for CPU interface
CPU_SDA	14	I/O	SDA in I^2C for CPU interface
PWM_CTL	15	O	PWM control signal (Detail description in PWM Operation Section)
CLK_1M	16	I	Free Running Clock (default: 1MHz)
VDD	17		Power Supply
CLK_1M_O	18	O	Feedback of free Running Clock
RESET_B	19	I	System Reset (active LOW)
R_OSM	20	I	OSM Color Red
G_OSM	21	I	OSM Color Green
B_OSM	22	I	OSM Color Blue
EN_OSM	23	I	OSM Mixer Enable =0, No OSM output =1, R_OUT[7:0] = {R_OSM repeat 8 times} G_OUT[7:0] = {G_OSM repeat 8 times} B_OUT[7:0] = {B_OSM repeat 8 times}
SCAN_EN	24	I	Manufacturing test pin (NC)
TEST_EN	25	I	Manufacturing test pin (NC)
VCLK01	26	I	Input Clock 1
FCLK0	27	O	Input PLL Feedback Clock
VCLK00	28	I	Input Clock 0
FCLK1	29	O	Output PLL Feedback Clock
VCLK1	30	I	Output PLL Output Clock
HSYNC_O	31	O	Output HSYNC (the polarity is programmable through CPU, default is active low)
VSYNC_O	32	O	Output VSYNC (the polarity is programmable through CPU, default is active low)
DCLK_OUT	33	O	Output Clock to Control Panel (the polarity is Programmable through CPU)
DE_OUT	34	O	Output Display Enable for Panel (the polarity is Programmable through CPU, default is active HIGH)
GND	35		Ground
VDD	36		Power Supply
R_OUT0_E	37	O	Output Color Red Even Pixel (left pixel)
R_OUT1_E	38	O	Output Color Red Even Pixel (left pixel)
R_OUT2_E	39	O	Output Color Red Even Pixel (left pixel)
R_OUT3_E	40	O	Output Color Red Even Pixel (left pixel)
VDD	46		Power Supply
R_OUT5_E	47	O	Output Color Red Even Pixel (left pixel)
GND	48		Ground
R_OUT6_E	49	O	Output Color Red Even Pixel (left pixel)
R_OUT7_E	50	O	Output Color Red Even Pixel (left pixel)
GND	51		Ground

R_OUT0_O	52	O	Output Color Red Odd Pixel (right pixel)
R_OUT1_O	53	O	Output Color Red Odd Pixel (right pixel)
R_OUT2_O	54	O	Output Color Red Odd Pixel (right pixel)
R_OUT3_O	55	O	Output Color Red Odd Pixel (right pixel)
VDD	56		Power Supply
R_OUT4_O	57	O	Output Color Red Odd Pixel (right pixel)
R_OUT5_O	58	O	Output Color Red Odd Pixel (right pixel)
R_OUT6_O	59	O	Output Color Red Odd Pixel (right pixel)
R_OUT7_O	60	O	Output Color Red Odd Pixel (right pixel)
GND	61		Ground
G_OUT0_E	62	O	Output Color Green Even Pixel (left pixel)
G_OUT1_E	63	O	Output Color Green Even Pixel (left pixel)
G_OUT2_E	64	O	Output Color Green Even Pixel (left pixel)
G_OUT3_E	65	O	Output Color Green Even Pixel (left pixel)
G_OUT4_E	66	O	Output Color Green Even Pixel (left pixel)
VDD	67		Power Supply
G_OUT5_E	68	O	Output Color Green Even Pixel (left pixel)
G_OUT6_E	69	O	Output Color Green Even Pixel (left pixel)
G_OUT7_E	70	O	Output Color Green Even Pixel (left pixel)
GND	71		Ground
GND	72		Ground
G_OUT0_O	73	O	Output Color Green Odd Pixel (right pixel)
G_OUT1_O	74	O	Output Color Green Odd Pixel (right pixel)
G_OUT2_O	75	O	Output Color Green Odd Pixel (right pixel)
G_OUT3_O	76	O	Output Color Green Odd Pixel (right pixel)
VDD	77		Power Supply
G_OUT4_O	78	O	Output Color Green Odd Pixel (right pixel)
G_OUT5_O	79	O	Output Color Green Odd Pixel (right pixel)
G_OUT6_O	80	O	Output Color Green Odd Pixel (right pixel)
G_OUT7_O	81	O	Output Color Green Odd Pixel (right pixel)
GND	82		Ground
GND	83		Ground
B_OUT0_E	84	O	Output Color Blue Even Pixel (left pixel)
B_OUT1_E	85	O	Output Color Blue Even Pixel (left pixel)
B_OUT2_E	86	O	Output Color Blue Even Pixel (left pixel)
B_OUT3_E	87	O	Output Color Blue Even Pixel (left pixel)
B_OUT4_E	88	O	Output Color Blue Even Pixel (left pixel)
B_OUT5_E	89	O	Output Color Blue Even Pixel (left pixel)
B_OUT6_E	90	O	Output Color Blue Even Pixel (left pixel)
VDD	91		Power Supply
VDD	92		Power Supply
B_OUT7_E	93	O	Output Color Blue Even Pixel (left pixel)
GND	94		Ground
B_OUT0_O	95	O	Output Color Blue Odd Pixel (right pixel)
B_OUT1_O	96	O	Output Color Blue Odd Pixel (right pixel)
B_OUT2_O	97	O	Output Color Blue Odd Pixel (right pixel)
B_OUT3_O	98	O	Output Color Blue Odd Pixel (right pixel)
VDD	99		Power Supply
B_OUT4_O	100	O	Output Color Blue Odd Pixel (right pixel)
B_OUT5_O	101	O	Output Color Blue Odd Pixel (right pixel)
B_OUT6_O	102	O	Output Color Blue Odd Pixel (right pixel)
B_OUT7_O	103	O	Output Color Blue Odd Pixel (right pixel)
GND	104		Ground
R_IN00	105	I	Channel A Data Input Color Red (LSB)
R_IN01	106	I	Channel A Data Input Color Red
R_IN02	107	I	Channel A Data Input Color Red
R_IN03	108	I	Channel A Data Input Color Red
VDD	109		Power Supply
R_IN04	110	I	Channel A Data Input Color Red

R_IN05	111	I	Channel A Data Input Color Red
R_IN06	112	I	Channel A Data Input Color Red
R_IN07	113	I	Channel A Data Input Color Red (MSB)
R_IN10	114	I	Channel B Data Input Color Red (LSB)
R_IN11	115	I	Channel B Data Input Color Red
GND	116		Ground
R_IN12	117	I	Channel B Data Input Color Red
R_IN13	118	I	Channel B Data Input Color Red
VDD	119		Power Supply
R_IN14	120	I	Channel B Data Input Color Red
R_IN15	121	I	Channel B Data Input Color Red
R_IN16	122	I	Channel B Data Input Color Red
R_IN17	123	I	Channel B Data Input Color Red (MSB)
GND	124		Ground
G_IN00	125	I	Channel A Data Input Color Green (LSB)
G_IN01	126	I	Channel A Data Input Color Green
G_IN02	127	I	Channel A Data Input Color Green
G_IN03	128	I	Channel A Data Input Color Green
VDD	129		Power Supply
G_IN04	130	I	Channel A Data Input Color Green
G_IN05	131	I	Channel A Data Input Color Green
ADC_CLK0	132	O	Sample Clock for ADC 0
G_IN06	133	I	Channel A Data Input Color Green
G_IN07	134	I	Channel A Data Input Color Green (MSB)
GND	135		Ground
G_IN10	136	I	Channel B Data Input Color Green (LSB)
G_IN11	137	I	Channel B Data Input Color Green
ADC_CLK1	138	O	Sample Clock for ADC 1
G_IN12	139	I	Channel B Data Input Color Green
G_IN133	140	I	Channel B Data Input Color Green
VDD	141		Power Supply
G_IN14	142	I	Channel B Data Input Color Green
G_IN15	143	I	Channel B Data Input Color Green
G_IN16	144	I	Channel B Data Input Color Green
G_IN17	145	I	Channel B Data Input Color Green (MSB)
GND	146		Ground
B_IN00	147	I	Channel A Data Input Color Blue (LSB)
B_IN01	148	I	Channel A Data Input Color Blue
B_IN02	149	I	Channel A Data Input Color Blue
VDD	150		Power Supply
B_IN03	151	I	Channel A Data Input Color Blue
B_IN04	152	I	Channel A Data Input Color Blue
B_IN05	153	I	Channel A Data Input Color Blue
B_IN06	154	I	Channel A Data Input Color Blue
B_IN07	155	I	Channel A Data Input Color Blue (MSB)
GND	156		Ground
HSYNC_I	157	I	Input HSYNC (any polarity)
VSYNC_I	158	I	Input VSYNC (any polarity)
DE_IN	159	I	DE input for digital interface
VDD	160		Power Supply

2.4.5 Functional description

The AM121-2 has the following major function block

Input mode detection and auto calibration block

Buffer memory and read/write control block

Image scaling, interpolation and dithering block

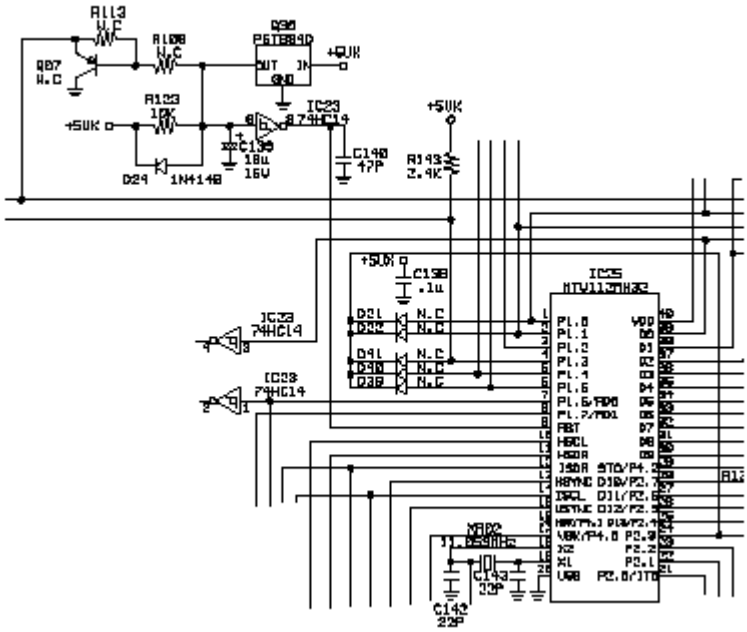
OSM mixer and LCD interface block

EEPROM interface block

CPU interface block

2.5 Reset signal generator circuit

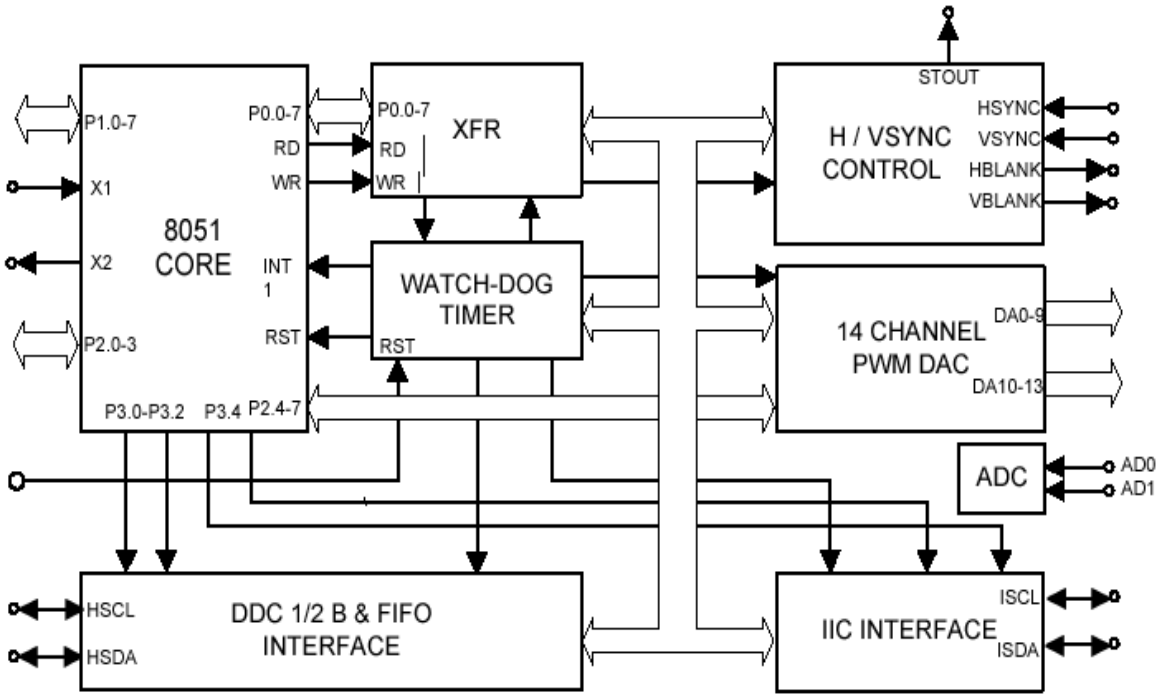
Q30 is a reset IC. MPU (IC25) needs a reset signal if the monitor powered On and OFF. Q30 will create a reset signal when +5Vx voltage is 4.2V. When we turn on the monitor and the +5Vx is increase to 4.2V, Q30 will create a reset signal to reset MPU(IC25 Pin 9) . Also when user turns OFF the monitor and +5Vx decreases to 4.2V, Q30 will create a reset signal to reset the MPU and the reset time is about 100ms (MPU needs 10ms to reset).



2.6 CPU (MTV112MN32) description

2.6.1 CPU internal block

The MTV112MN32 micro-controller is an 8051 CPU core embedded device specially tailored to LCD monitor applications. It includes an 8051 CPU core, 256 bytes SRAM, fourteen built-in PWMDACs, DDC1/DDC2B interface, 24Cxx series EEPROM interface, A/D converter and a 32K bytes internal program EPROM.



2.6.2 Features

8051 core.

384 bytes internal RAM.

32K bytes program EPROM

14 channels 10V open drain PWM DAC, 10 dedicated channels and 4 channels shared with I/O pin.

20 bi-direction I/O pin, 12 dedicated pin, 4 shared with DAC, 4 shared with DDC/IIC interface.

3-output pin shared with H/V sync output and self test output pins.

SYNC processor for composite separation, polarity and frequency check, and polarity adjust.

Built-in monitor self-test pattern generator.

Built-in Low Power Reset circuit.

One slave mode IIC interface and one master mode IIC interface.

IIC interface for DDC1/DDC2B and EEPROM, only one EEPROM needed to store DDC1/DDC2B and display mode information.

Dual 4 bit ADC.

Watch dog timer with programmable interval.

2.6.3 Pin description

Name	Type	Pin#			Description
		40	42	44	
P1.0	I/O	1	1	2	General purpose I/O
P1.1/HALFV	I/O	2	2	3	General purpose I/O / V-sync half frequency output.
P1.2/HALFH	I/O	3	3	4	General purpose I/O / H-sync half frequency output.
P1.3/HCLAMP	I/O	4	4	5	General purpose I/O / H-sync clamp pulse output.
P1.4/AD2	I/O	5	5	6	General purpose I/O / ADC input.
P1.5/AD3	I/O	6	6	7	General purpose I/O / ADC input.
P1.6/AD0	I/O	7	7	9	General purpose I/O / ADC input.
P1.7/AD1	I/O	8	8	10	General purpose I/O / ADC input.
RST	I	9	9	11	Active high reset
HSCL/P3.0/Rxd	I/O	10	10	12	IIC clock / General purpose I/O / Rxd
HSDA/P3.1/Txd	I/O	11	11	13	IIC data / General purpose I/O / Txd
ISDA/P3.2/INT0	I/O	12	12	14	IIC data / General purpose I/O / INT0
HSYNC	I	13	13	15	Horizontal SYNC or Composite SYNC
ISCL/P3.4/T0	I/O	14	14	16	IIC clock / General purpose I/O / T0
VSYNC	I	15	15	17	Vertical SYNC
HBLANK/P4.1	O	16	17	19	Horizontal blank / General purpose output
VBLANK/P4.0	O	17	18	20	Vertical blank / General purpose output
X2	O	18	19	21	Oscillator output
X1	I	19	20	22	Oscillator input
VSS	-	20	21	23	Ground
P2.0/INT0	I/O	21	22	24	General purpose I/O / INT0
P2.1	I/O	22	23	25	General purpose I/O
P2.2	I/O	23	24	26	General purpose I/O
P2.3	I/O	24	25	27	General purpose I/O
DA13/P2.4	I/O	25	26	28	PWM DAC output / General purpose I/O (open-drain)
DA12/P2.5	I/O	26	27	30	PWM DAC output / General purpose I/O (open-drain)
DA11/P2.6	I/O	27	28	31	PWM DAC output / General purpose I/O (open-drain)
DA10/P2.7	I/O	28	29	32	PWM DAC output / General purpose I/O (open-drain)
STOUT/P4.2	O	29	30	33	Self-test video / General purpose output
DA9	O	30	32	34	PWM DAC output / General purpose I/O (open-drain)
DA8	O	31	33	35	PWM DAC output / General purpose I/O (open-drain)
DA7/P5.7	O	32	34	36	PWM DAC output / General purpose I/O (open-drain)
DA6/P5.6	O	33	35	37	PWM DAC output / General purpose I/O (open-drain)
DA5/P5.5	O	34	36	38	PWM DAC output / General purpose I/O (open-drain)
DA4/P5.4	O	35	37	39	PWM DAC output / General purpose I/O (open-drain)
DA3/P5.3	O	36	38	41	PWM DAC output / General purpose I/O (open-drain)
DA2/P5.2	O	37	39	42	PWM DAC output / General purpose I/O (open-drain)
DA1/P5.1	O	38	40	43	PWM DAC output / General purpose I/O (open-drain)
DA0/P5.0	O	39	41	44	PWM DAC output / General purpose I/O (open-drain)
VDD	-	40	42	1	Positive power supply

2.6.4 H/V-sync processing

H/V Polarity Detection

The Polarity functions detect the input HSYNC/VSYNC high and low pulse duty pluse. If the high pluse duration is longer than that of the low pluse, the negative polarity is asserted; otherwise, positive polarity is asserted. The HPLchg interrupt is set when the Hpol value changes. The VPLchg interrupt is set when the Vpol value changes.

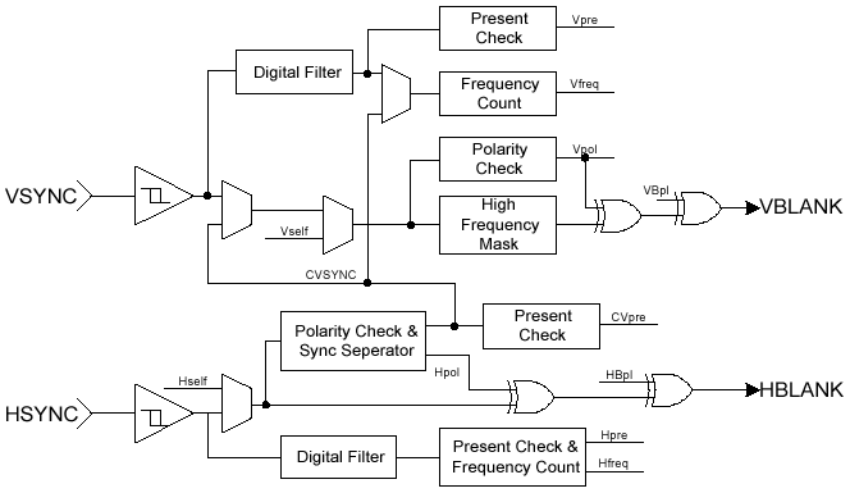
Output HBLANK/VBLANK Control and Polarity Adjustment

The HBLANK is the mux output of HSYNC and self-test horizontal pattern. The VBLANK is the mux output of VSYNC, CVSYNC and the self-test vertical pattern. The mux selection and output polarity are S/W controllable. The VBLANK output is cut off when VSYNC frequency is over 200Hz or 133Hz depends on 8MHz/12MHz OSC selection. The HBLANK/VBLANK shares the output pin with P4.1/P4.0

VSYNC interrupt

MTV112MN32 checks the VSYNC input pluse and generates an interrupt at its leading edge. The VSYNC1 flag is set each time MTV112MN32 detects a VSYNC pluse.

H/V SYNC Processor Block Diagram



2.6.5 DDC & IIC Interface

DDC1 Mode

MTV112MN32 enters DDC1 mode after Reset. In this mode, VSYNC is a data clock. The HSCL pin should remain at high. The data output to the HSDA pin is taken from 8 bytes FIFO in MTV112MN32. MTV112MN32 fetches the data byte from FIFO, then sends it in a 9-bit packet format which includes a null bit (=1) as packet separator. The software program should load EDID data (original stored in EEPROM) into FIFO and take care of the FIFO depth. FIFO sets the FIFOI (FIFO low interrupt) flag when there are fewer than N (N=2,3,4 or 5 controlled by LS1, LS0) bytes to be output to the HSDA pin. To prevent FIFO from emptying, software needs to write EDID data to FIFO as soon as FIFOI is set. On the other hand, FIFO sets the FIFOI flag when its capacity is full. Software should not write additional data to FIFO in such instance. The FIFOI interrupt can be masked or enabled by an EFIFO control bit. A simple way to control FIFO is to set (LS1, LS0=1,0) and enable FIFOI interrupt, then software may load 4 bytes into FIFO each time a FIFOI interrupt arises. A special control bit “LDFIFO” can reduce the software effort when EDID data is stored in EEPROM. If LDFIFO=1, FIFO will be automatically loaded with MBUF data when software reads MBUF XFR.

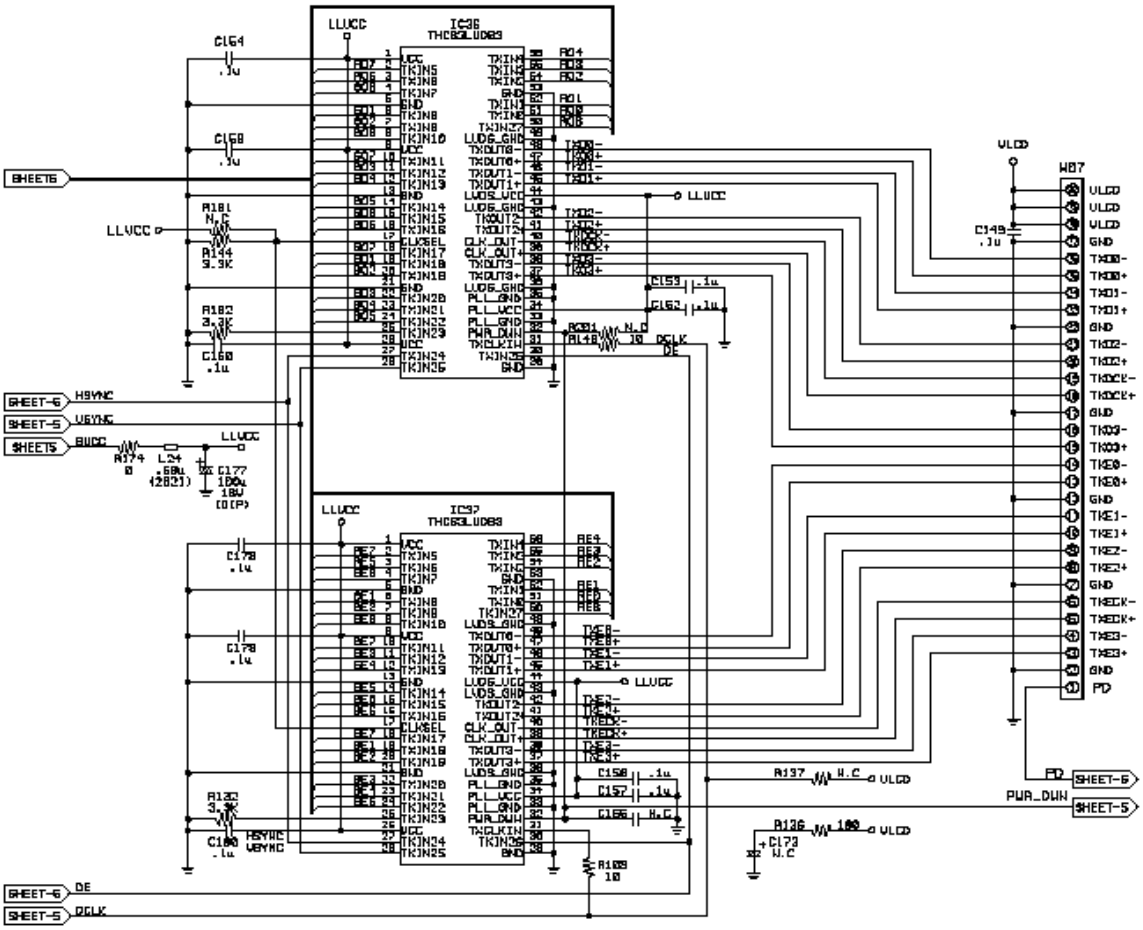
DDC2B Mode

MTV112MN32 switches to DDC2B mode when it detects a high to low transition on the HSCL pin. Once MTV112MN32 enters DDC2B mode, the host can access the EEPROM using IIC bus protocol as if the HSDA and HSCL are directly bypassed to ISDA and ISCL pins. MTV112MN32 will return to DDC1 mode if HSCL is kept high for a 128 VSYNC clock period. However, it will lock in DDC2B mode if a valid IIC access has been detected on HSCL/HSDA bus. The DDC2 flag reflects the current DDC status. S/W may clear it by setting CLRDDC. Control bits M128/M256 are used to block the EEPROM write operating from the host if the address is over 128/256.

2.7 LVDS description

2.7.1 Circuit

The 48-bit digital signal output from the scaling IC (IC02) is entered in the LVDS transmitter (IC36, IC37). The LVDS signal is transmitted from W07 to the panel control board, and decoded within this board.

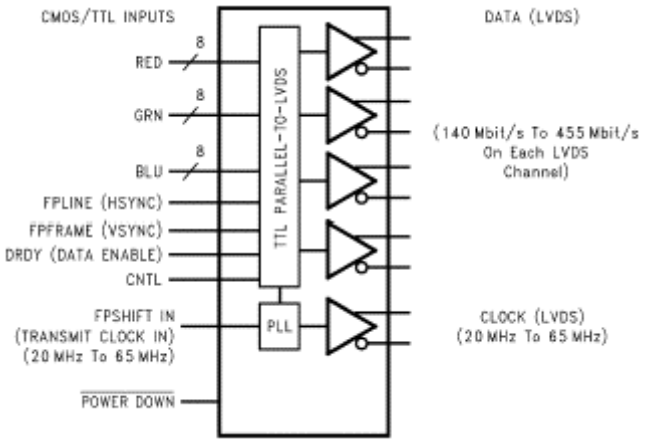


2.7.2 General description

The THC63LVDM83A transmitter converts 28 bit CMOS/TTL data into four LVDS (Low Voltage Differential Signaling) data streams. A phase-locked transmit clock is transmitted in parallel with the data streams over a fifth LVDS link. Every cycle of the transmit clock 28 bits of input data are sampled and transmitted. At a transmit clock frequency of 65MHz, 24 bits of RGB data and 3bits of LCD timing and control data (HSYNC, VSYNC, DATA ENABLE) are transmitted at a rate of 455 Mbps per LVDS data channel. Using a 65MHz clock, the data throughput is 227 Mbytes/sec. The THC63LVDM83A transmitter can be programmed for Rising edge strobe or Falling edge strobe through a dedicated pin. A Rising edge or Falling edge strobe transmitter will inter operate with a Falling edge strobe Receiver without any translation logic.

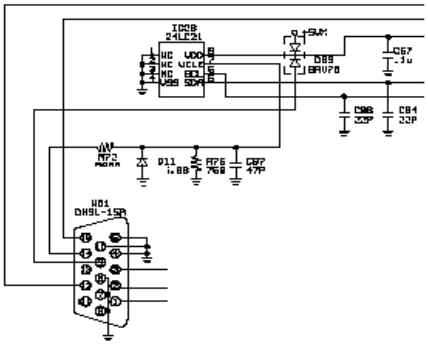
This chipset is an ideal means to solve EMI and cable size problems associated with wide, high speed TTL interfaces.

2.7.3 Functional block diagram

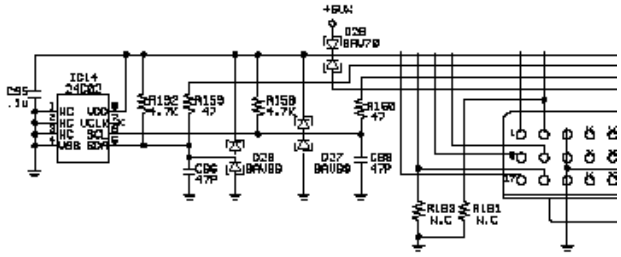


2.8 DDC circuit description

2.8.1 Analog circuit



2.8.2 Digital circuit



2.8.3 General description

The EEPROM for DDC are two pieces (IC26, IC14) in analog and digital. The EDID of both IC are same data. IC26 has DDC1 mode and DDC2B mode, but this circuit supported only DDC2B mode. IC14 only has DDC2B.

The DDC2B communication uses the same line as Input 2 port. This mode activate at factory adjustment. Therefore it is set into inactive in shipment. The DDC2B communication is processed in SUB-CPU.

Both Input port operates similar on DDC2B communication. Then following explanation is for D-SUB circuit.

When the power supply of the set is turned OFF, the VDD of IC26 is applied to Pin 9 of W01 and power is through the D09. When the power supply of the set is turned ON, VDD is applied to IC22 through D09. Same principle of IC14.

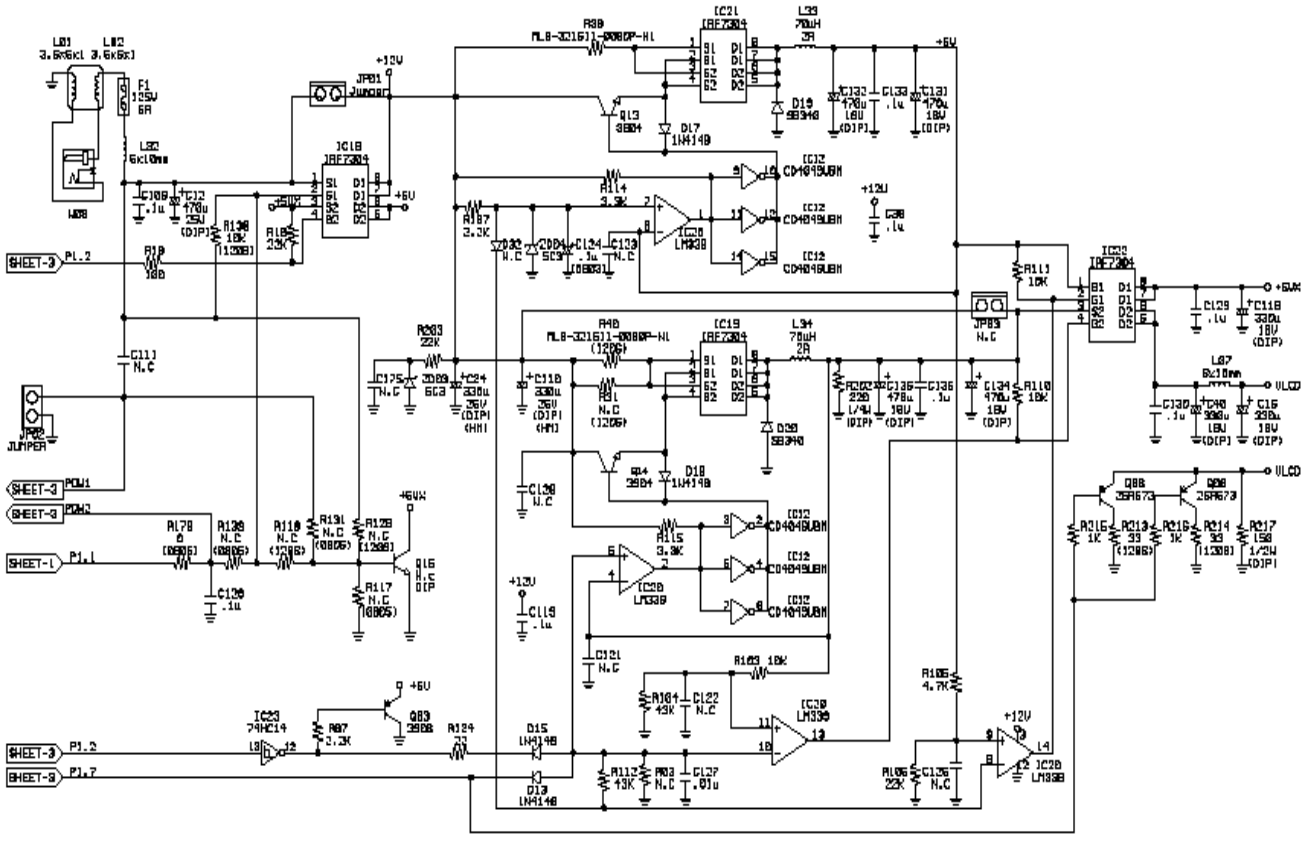
2.9 Power system circuit and description

The LCD1920NX uses an external power adaptor to provide the DC+12 voltage. In order to greatly reduce the power consumption when in power saving stage, the circuit is used not only to convert the +12V to +5V, but also to control the +5V ON/OFF status. When +12Vdc current enters W09 12V enters the whole system.

There are two regulators that convert the 12V to 5V. They are +5Vx and VLCD. The comparator of IC20 will make the output of two regulators as a feed back to compare to the reference voltage. The compared result will then control ON/OFF of IC19.

Time to achieve the voltage regulation affects ZD04 will create the reference voltage. Q13, Q14 and MC4049 are basically used to speed up the MOSFET ON/OFF switching time in order to reduce IC19 power consumption. This product is also equiped with over-voltage protection circuit. When voltage of +5V at W09 is over 6Volts, IC20 Pin 14 will be pull high and Power MOS will be turned off, the voltage of +5Vx is not support. The same theory of VLCD.

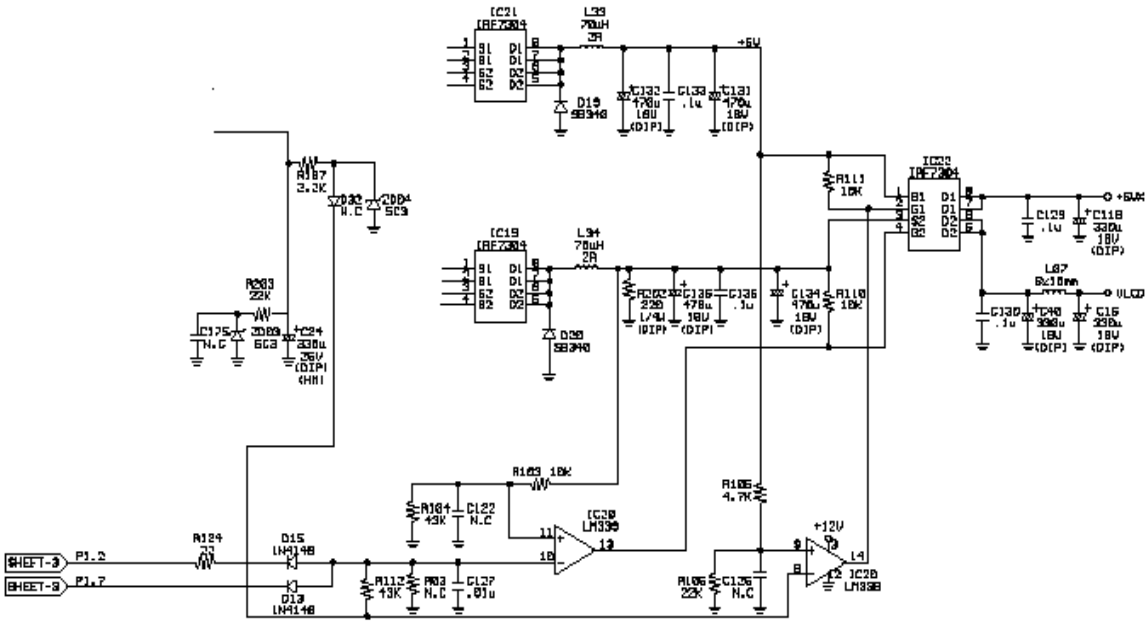
The +5V and VLCD source provide most of the required power for the LCD1920NX and LCD panel. When system enter the power saving stage, the above two power sources will turn off through IC25 Pin 3. The +5V source provides power to the CPU and SYNC processor, so it must be isolated from other power source. When in power saving stage, IC25 Pin 3 will be set to low level to make the +5V and VLCD to be at cut off.



2.10 Over voltage protection

Over voltage protection is needed on any power system. If some failure occurs and the voltage of +5Vx is too high, the power system has over voltage protection circuit. +5Vx system has a comparator (IC20-LM339), if the voltage of IC20 Pin 9 is higher than ZD03, IC20 Pin 14 will generate a High level output and MOSFET will turned OFF. And the +5Vx will not support of all system.

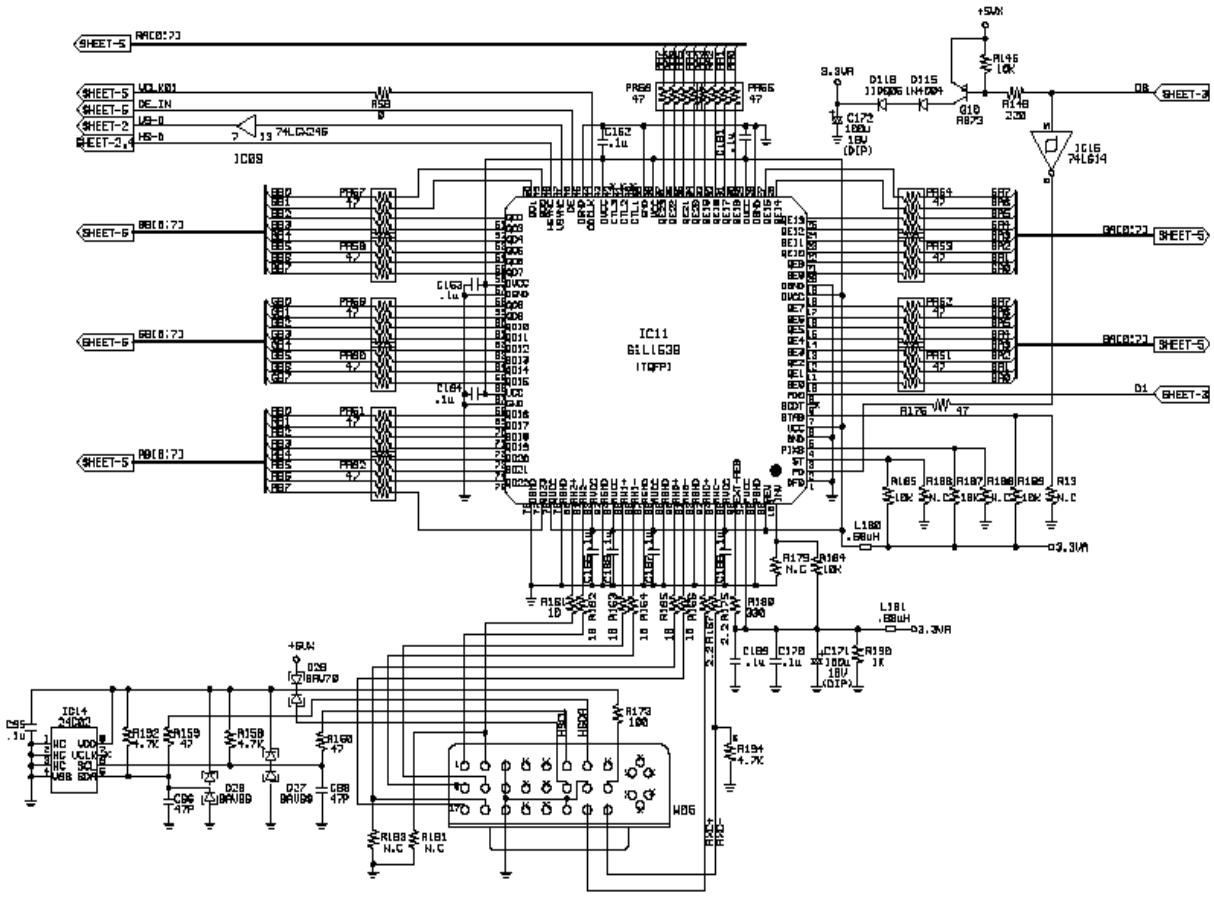
The same principle of VLCD. And protection voltage is about (Zener voltage 5V/22K)*(22K+4.7K)= 6.1V. When voltage is over 6.1V, IC20 Pin 13 will output a High level output and VLCD will not support IC22 (MOSFET) .



2.11 TMDS signal process

2.11.1 Circuit and description

This product uses IC11 (SiL153B) for digital interface, IC14 (24C02) is digital interface DDC data and uses W06 DVI interface for TMDS signal to IC11. When digital interface D6 is at Low level , Q10 is turned on and power of IC11 is output through D115 and D116 and the power will support about 3.5V. IC11 generates DE, CLK, H-Sync, V-Sync and data to AM121-2. When D6 is HIGH and Q10 is turned off, so IC11 will not support the power. At same condition IC15 (74LS14) Pin 6 will transfer a LOW level and IC11 enters into Power down status.



2.11.2 Chip general description

IC11 uses PanelLink Digital technology to support displays ranging from VGA to SXGA (25-135MHz) which is ideal for desktop and specialty applications. The SiL161 receiver supports up to true color panels (24 bit/pixel, 16.7M colors) in 1 or 2 pixels/clock mode, and also features an inter-pair skew tolerance up to 1 full input clock cycle. In addition, the receiver output data is time staggered to reduce ground bounce which affects EMI. Since all PanelLink products are designed on scaleable CMOS architecture to support future performance requirements while maintaining the same logical interface. System designers can be assured that the interface will be fixed through a number of the technology and performance generations. PanelLink Digital technology simplifies PC design by resolving many of the system level issues associated with high-speed digital design, providing the system designer with a digital interface solution that is quicker to market and lower in cost.

2.11.3 Features

Scaleable Bandwidth : SXGA(25-135MHz)

Low Power 3.3V core operation & power-down mode

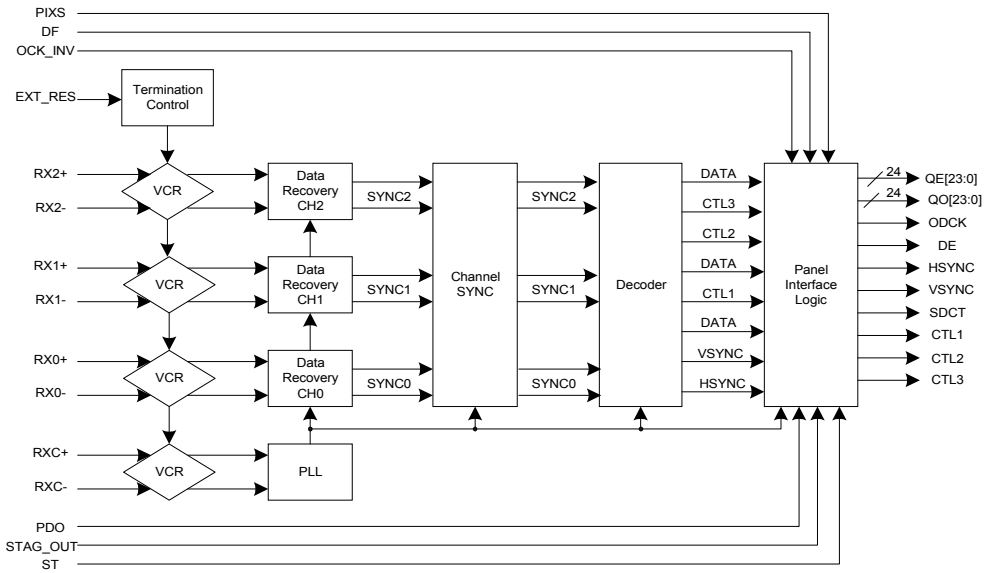
High Skew Tolerance : 1 full input clock cycle (15ns at 65MHz)

Time staggered data output for reduced ground bounce

Sync Detect for Plug & Display “Hot Plugging”

Cable Distance Support : over 5m with twisted-pair, fiber-optics ready

Compliant with : VESA® P&D™ , VESA®FPDI-2™ , VESA®TMDS™ , DFP Port



2.11.4 Pin description

Pin Name	Pin #	Type	Description
SCDT	8	Out	Sync Detect. A HIGH level is outputted when DE is actively toggling indicating that the link is alive. A LOW level is outputted when DE is inactive, indicating the link is down. Can be connected to PDO to power down the outputs when DE is not detected. The SCDT output itself, however, Remains in the active mode at all times.
PDO	9	In	Output Driver Power Down (active LOW). A HIGH level indicates normal operation. A LOW level puts all the output drivers only (except SCDT and CTL1) into a high impedance (tri-stats) mode. A weak internal pull-down device brings each output to ground. PDO is a sub-set of the PD description. The chip is not in power-down mode with this pin. There is an internal pull-up resistor that defaults the chip to normal operation if left unconnected. SCDT and CTL1 are not tri-stated by this pin.
PD	2	In	Power Down (active LOW). A HIGH level indicates normal operation and a LOW level indicates power down mode. During power down mode, all output buffers are disabled and brought low, all analog logic is powered down, and all inputs are disabled.

Differential Signal Data Pin Description

Pin Name	Pin #	Type	Description
RX0+	90	Analog	TMDS Low Voltage differential Signal input data pairs.
RX0-	91	Analog	
RX1+	85	Analog	
RX1-	86	Analog	
RX2+	80	Analog	
RX2-	81	Analog	
RXC+	93	Analog	TMDS Low Voltage differential Signal input data pairs.
RXC-	94	Analog	
PDO	9	In	Impedance Matching Control. Resistor value should be ten times the characteristic impedance of the cable. In the common case of 50Ω transmission line, an external 500Ω resistor must be connected between AVCC and this pin.

Output Pins Description

Pin Name	Pin #	Type	Description
QE23 - QE0	See SiL161A Pin Diagram	Out	Output Even Data [23:0] corresponds to 24-bit pixel data for 1-pixel/clock input mode and to the first 24-bit pixel data for 2-pixels/clock mode. Output data is synchronized with output data clock (ODCK). Refer to the TFT Signal Mapping application note (SiL/AN-0007) which tabulates the relationship between the input data to the transmitter and output data from the receiver. A low level on PD or PDO will put the output drivers into a high impedance (tri-state) mode. A weak internal pull-down device brings each output to ground.
QO23 - QO0	See SiL161A Pin Diagram	Out	Output Odd Data [23:0] corresponds to the second 24-bit pixel data for 2-pixels/clock mode. During 1-pixel/clock mode, these outputs are driven low. Output data is synchronized with output data clock (ODCK). Refer to the TFT Signal Mapping application note (SiL/AN-0007) which tabulates the relationship between the input data to the transmitter and output data from the receiver. A low level on PD or PDO will put the output drivers into a high impedance (tri-state) mode. A weak internal pull-down device brings each output to ground.
ODCK	44	Out	Output Data Clock. This output can be inverted using the OCK_INV pin. A low level on PD or PDO will put the output driver into a high impedance (tri-state) mode. A weak internal pull-down device brings the output to ground.
DE	46	Out	Output Data Enable. This signal qualifies the active data area. A HIGH level signifies active display time and a LOW level signifies blanking time. This output signal is synchronized with the output data. A low level on PD or PDO will put the output driver into a high impedance (tri-state) mode. A weak internal pull-down device brings the output to ground.
HSYNC **VSYNC** **CTL1** **CTL2** **CTL3**	48 47 40 41 42	Out Out Out Out Out	Horizontal Sync input control signal. Vertical Sync input control signal. General output control signal 1. This output is not powered down by PDO. General output control signal 2. General output control signal 3. A low level on PD or PDO will put the output drivers (except CTL1 by PDO) into a high impedance (tri-state) mode. A weak internal pull-down device brings each output to ground.

Reserved Pin Description

Pin Name	Pin #	Type	Description
Reserved	99	In	Must be tied HIGH for normal operation.

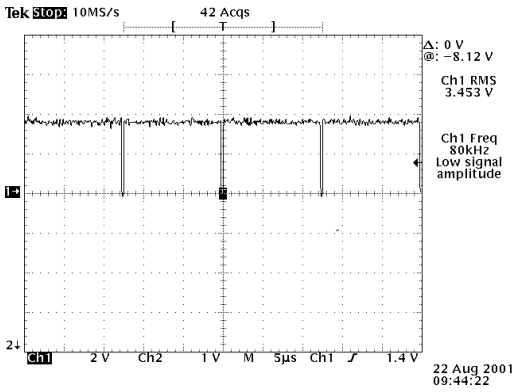
Power and Ground Pin Description

Pin Name	Pin #	Type	Description
VCC	6,38,67	Power	Digital Core VCC, must be set to 3.3V.
GND	5,39,68	Ground	Digital Core GND.
OVCC	18,29,43,57,78	Power	Output VCC, must be set to 3.3V.
OGND	19,28,45,58,76	Ground	Output GND.
AVCC	82,84,88,95	Power	Analog VCC must be set to 3.3V.
AGND	79,83,87,89,92	Ground	Analog GND.
PVCC	97	Power	PLL Analog VCC must be set to 3.3V.
PGND	98	Ground	PLL Analog GND.

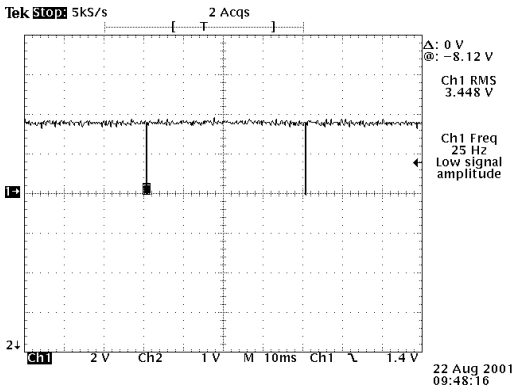
Configuration Pins Description

Pin Name	Pin #	Type	Description
OCK_INV	100	In	ODCK Polarity. A LOW level selects normal ODCK output. A HIGH level selects inverted ODCK output. All other output signals are not affected by this pin. They will maintain the same timing no matter the setting of OCK_INV pin.
PIXS	4	In	Pixel Select. A LOW level indicates one pixel (up to 24-bits) per clock mode using QE[23:0] A HIGH level indicates two pixels (up to 48-bits) per clock mode using QE[23:0] for first pixel and QO[23:0] for second pixel.
DFO	1	In	Output Data Format. For all DVI applications, this pin should be tied LOW.
STAG_OUT	7	In	Staggered Output. A HIGH level selects normal simultaneous outputs on all odd and even data lines. A LOW level selects staggered output drive. This function is only available in 2-pixels per clock mode.
ST	3	In	Output Drive. A HIGH level selects HIGH output drive strength. A LOW level selects LOW output drive strength.

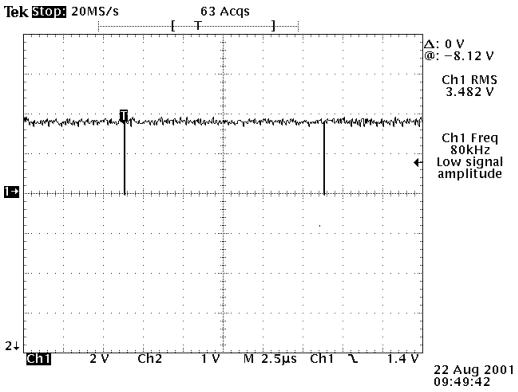
2.12 Waveforms



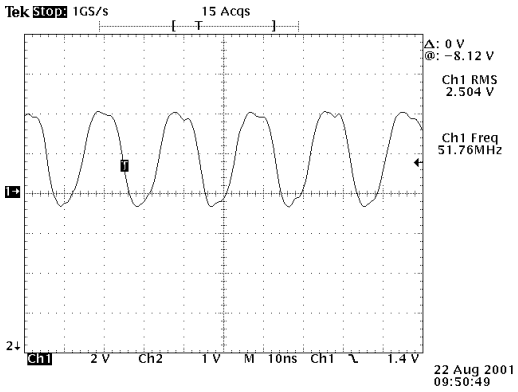
DE (IC02 Pin34)



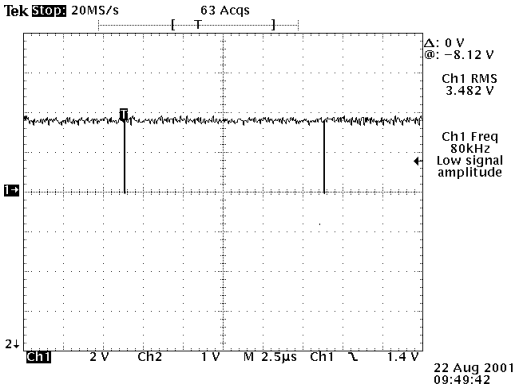
Vsync (IC02 Pin32)



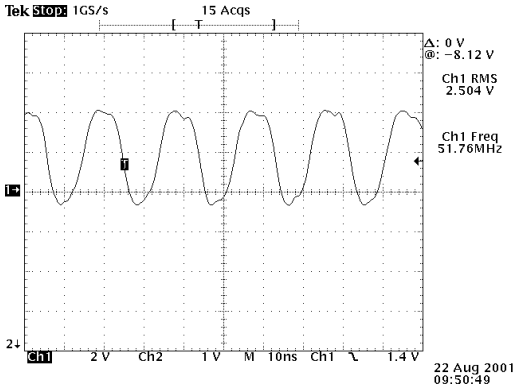
Hsync (IC02 Pin31)



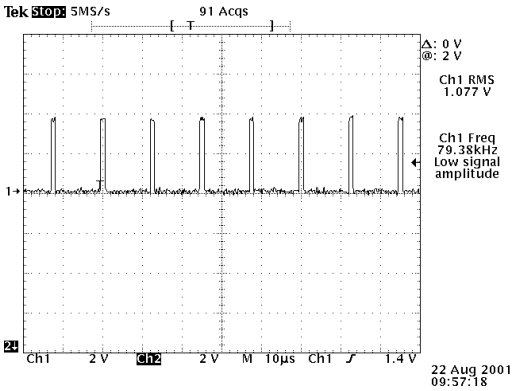
Data-clk (IC02 Pin33)



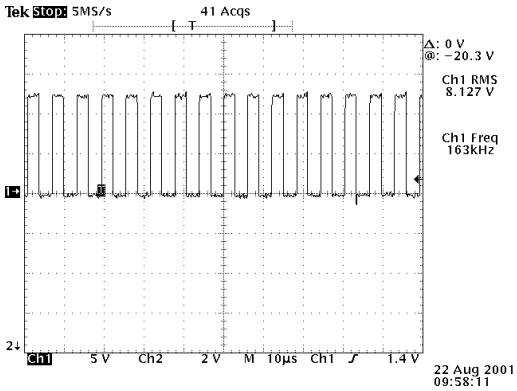
Vsync & Hsync (CH1:Vsync CH2:Hsync)



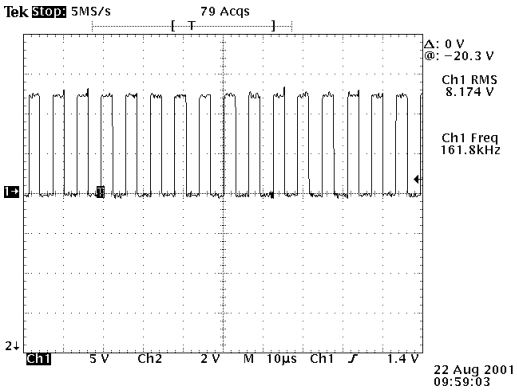
Vsync & DE (CH1:Vsync CH2:DE)



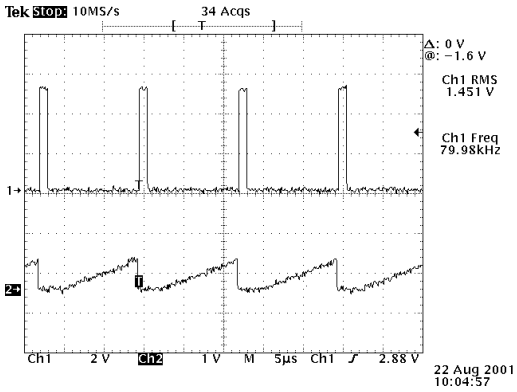
Free-run Hsync



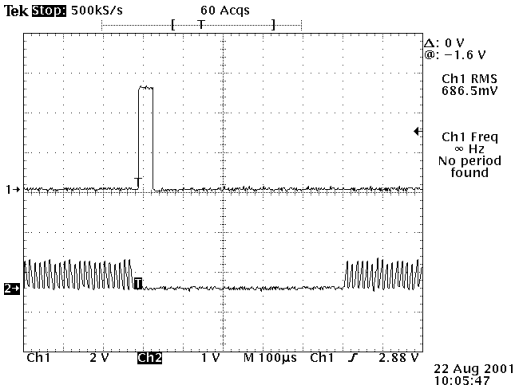
+5Vx switching power frequency (D19)



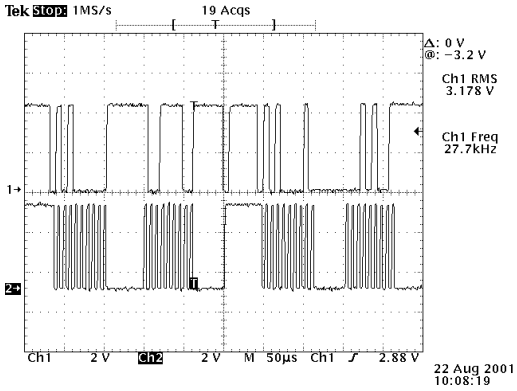
VLCD switch power frequency(D20)



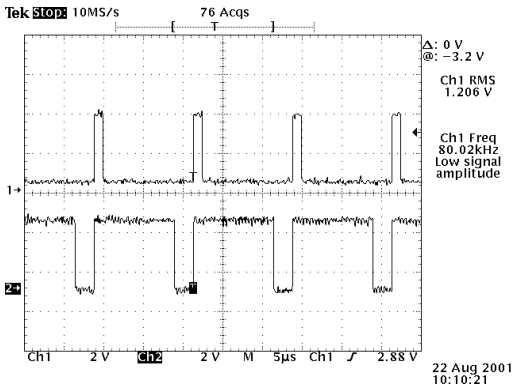
Input signal (CH1:Hsync CH2:Data)



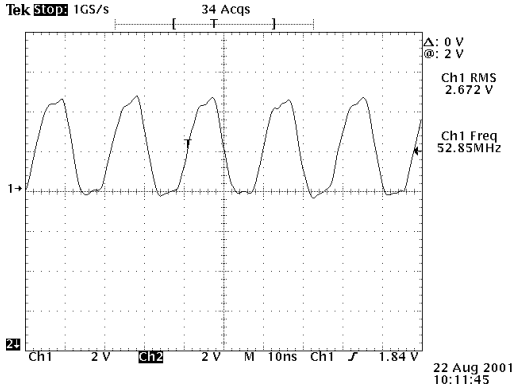
Input signal (CH1:Vsync CH2:Data)



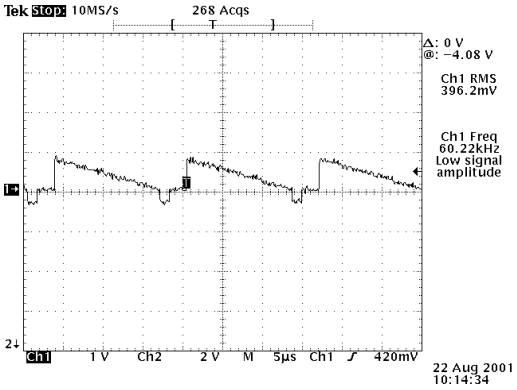
ISCL & ISDA (CH1:ISDA CH2:ISCL)



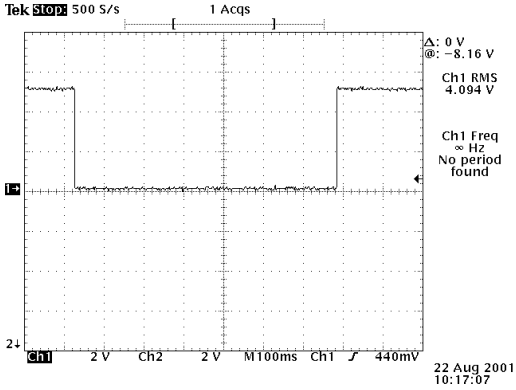
2933 PFD (CH1:IC03 Pin4 CH2:IC03 Pin5)



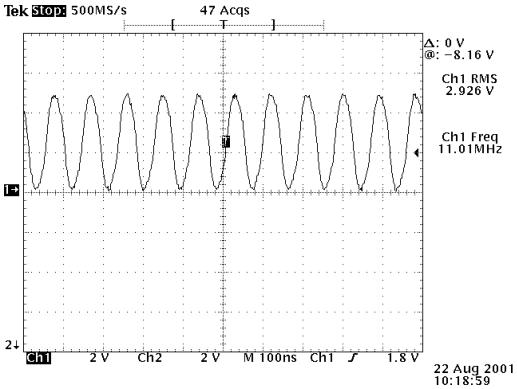
PLL output clk (IC03 Pin3)



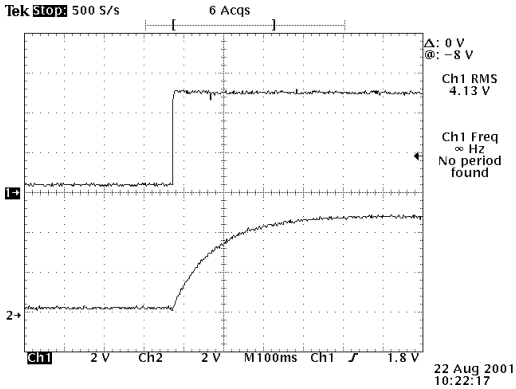
SOGIN (IC01 Pin14)



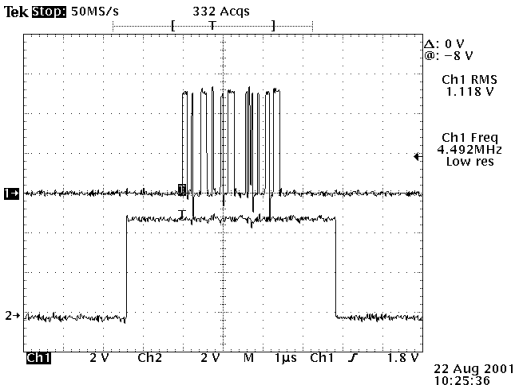
“-“; ”function”; ”+”; ”select” (WO4 Pins 1~4)



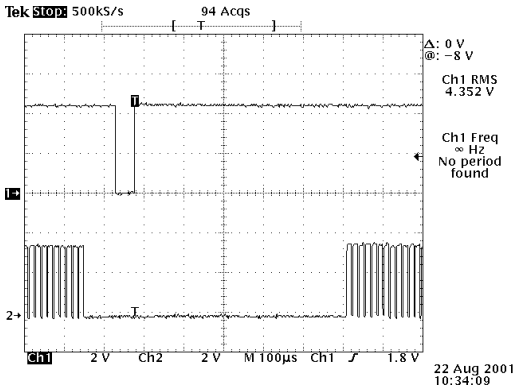
Crystal clk (IC25 Pins 18;19)



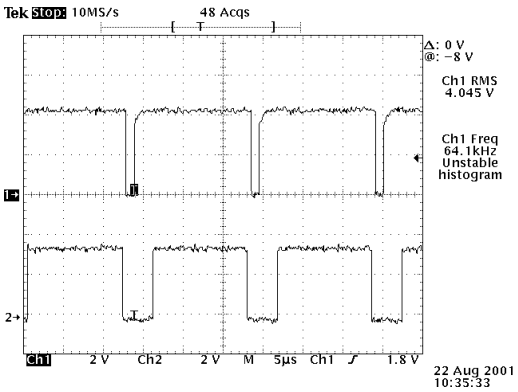
Reset signal (CH1:5Vx CH2:Q30 output pin)



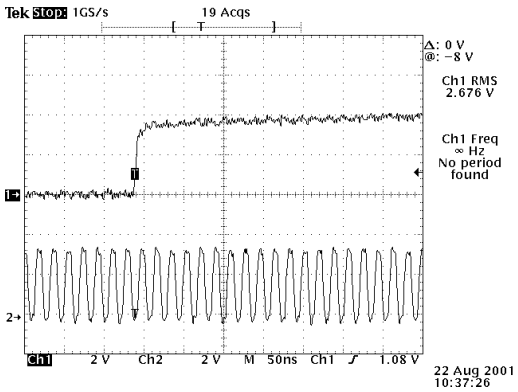
OSM Data (CH1:IC04 Pin15) vs. OSM DE (CH2:IC04 Pin12)



Digital Vsync & DE (CH1:Vsync CH2:DE)



Digital Hsync & DE (CH1:Hsync CH2:DE)



Digital Hsync & CLK (CH1:Hsync CH2:CLK)

REPLACEMENT PARTS LIST

The components specified for Model LCD1920NX(A)

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
*** ICS ***			
IC01	0430-8000-3846	79PZ0154	IC AD9884AKS-140 SMD 128P
IC02	0430-7007-4939	79PZ0151	IC AM121-2 SMD 160 PIN
IC03	0430-7000-6015	79PZ0148	IC TLC2933IPWR SMD 14PIN
IC04	0430-7007-7040	79PZ0152	IC MTV118P-49 16PIN
IC06	0430-1004-1035	79PZ0141	IC 74F153SC SMD 16PIN
IC07X	0990-0000-4400	79PZ0156	S/W RDT191S EEPROM(IC07)
IC08	0430-6002-0007	79PZ0146	IC LD1117S-ADJ SMD
IC09	0430-1003-3635	79PZ0138	IC 74LCX245MTCX SMD 20PIN
IC11	0430-7007-9738	79PZ0153	IC SII153BCT100 SMD 100PI
IC12	0430-0000-6004	79PZ0133	IC CD4049UBM SMD 16PIN
IC14	0430-3001-1011	79PZ0144	IC AT24C02N-10SC-2.7 SMD
IC15	0430-1003-0035	79PZ0137	IC DM74LS14MX SMD 14PIN
IC16	0430-0000-8035	79PZ0134	IC MM74HC4053WMX SMD 16PI
IC17	0430-1004-0635	79PZ0140	IC DM74LS86 SMD 14PIN
IC18	0420-1001-3601	79PZ0132	POWER MOS IRF7304 SMD 8PI
IC19	0420-1001-3601	79PZ0132	POWER MOS IRF7304 SMD 8PI
IC20	0430-4000-2004	79PZ0145	IC LM339M SMD-14 T
IC21	0420-1001-3601	79PZ0132	POWER MOS IRF7304 SMD 8PI
IC22	0420-1001-3601	79PZ0132	POWER MOS IRF7304 SMD 8PI
IC23	0430-1000-7035	79PZ0135	IC 74HC14 SMD 14PIN
IC24X	0990-0000-4500	79PZ0157	S/W RDT191S EEPROM(IC24)
IC25X	0990-2000-4406	79PZ0161	SOFTWARE LCD1920NX CPU:NE
IC26	0430-3000-2017	79PZ0143	IC MP24LC21AT/SN SMD 8PIN
IC27	0430-1000-8035	79PZ0136	IC MM74HC74AMX SMD 14PIN
IC28	0430-1000-7035	79PZ0135	IC 74HC14 SMD 14PIN
IC29	0430-1003-8635	79PZ0139	IC MM74HC08 SMD 14PIN
IC30	0430-1005-2035	79PZ0142	IC 74VHC32 SMD 14PIN
IC31	0430-6002-5051	79PZ0147	IC AMC7588-ADJ SMD 3PIN
IC33	0430-1000-8035	79PZ0136	IC MM74HC74AMX SMD 14PIN
IC34	0430-1003-8635	79PZ0139	IC MM74HC08 SMD 14PIN
IC36	0430-7003-7650	79PZ0149	IC THC63LVDM83A SMD 56PIN
IC37	0430-7003-7650	79PZ0149	IC THC63LVDM83A SMD 56PIN
Q30	0430-7004-4319	79PZ0150	IC PST994D TO-92 3PIN D=4
*** TRANSISTORS ***			
Q01	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q02	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q03	0410-5000-2610	79PZ0131	TRANSISTOR MMBT3906LT1 SM
Q04	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q05	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q06	0410-0000-2106	79PZ0129	TRANSISTOR 2SA673AC TO-92

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
Q08	0410-0000-2106	79PZ0129	TRANSISTOR 2SA673AC TO-92
Q09	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q10	0410-0000-2106	79PZ0129	TRANSISTOR 2SA673AC TO-92
Q11	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q12	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q13	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q14	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q16	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q19	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q25	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM

*** DIODES ***

D01	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D02	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D05	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D06	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D07	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D08	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D09	0390-5001-8293	79PZ0123	DUAL SURFACE DIODES BAV70
D11	0400-0541-2012	79PZ0128	ZENER RLZ5.6B 5.45V~5.73V
D115	0390-5000-4202	79PZ0122	GEN. DIODE 1N4004F T
D116	0390-6000-1012	79PZ0125	SCHOTTKY DIODE 11DQ06 T
D12	0400-0541-2012	79PZ0128	ZENER RLZ5.6B 5.45V~5.73V
D13	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D14	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D15	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D17	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D18	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D19	0390-6000-9172	79PZ0126	SCHOTTKY DIODE SB340 T
D20	0390-6000-9172	79PZ0126	SCHOTTKY DIODE SB340 T
D24	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D26	0390-5001-8293	79PZ0123	DUAL SURFACE DIODES BAV70
D27	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D28	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D31	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
LED01	0440-5000-0020	79PZ0155	LED L-59GYW 5
ZD03	0400-0511-2000	79PZ0127	ZENER 5C3 5.1-5.3V 1/2W
ZD04	0400-0511-2000	79PZ0127	ZENER 5C3 5.1-5.3V 1/2W

*** RELAYS & SWITCHES ***

SW1	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P
SW2	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P
SW3	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P
SW4	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P
SW5	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P

*** PWB ASSYS ***

DISBD	3190-0032-0156	79PZ0013	LCD DISPLAY BD ASS'Y

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
INV	0500-0105-0302	79PZ0008	INVERTER DC-AC T65I008.00
MAINBD	3190-0142-0150	79PZ0014	LCD MAIN BD ASS'Y

*** COILS & FILTERS ***

L01	0370-0000-1010	79PZ0113	FERRITE CORE RH 3.5X6X1.0
L02	0370-0000-1010	79PZ0113	FERRITE CORE RH 3.5X6X1.0
L05	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L06	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L07	0370-0000-1110	79PZ0114	FERRITE CORE W8 R6H 6X10
L08	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L11	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L16	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L160	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L161	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L20	0370-0000-3552	79PZ0116	CHIP BEAD CORE 30H
L21	0370-0000-3552	79PZ0116	CHIP BEAD CORE 30H
L22	0370-0000-3552	79PZ0116	CHIP BEAD CORE 30H
L23	0370-0000-5842	79PZ0118	CHIP BEAD CORE 40H
L24	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L25	0370-0000-5942	79PZ0119	CHIP BEAD CORE 60H
L26	0370-0000-5842	79PZ0118	CHIP BEAD CORE 40H
L32	0370-0000-1110	79PZ0114	FERRITE CORE W8 R6H 6X10
L33	0361-1000-0120	79PZ0112	DRUM CORE L:70UH 2A(10*16
L34	0361-1000-0120	79PZ0112	DRUM CORE L:70UH 2A(10*16
L35	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
PRA01	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA02	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA05	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA06	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA09	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA10	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB03	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB04	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB07	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB08	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB11	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB12	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
R39	0370-0000-4651	79PZ0117	CHIP BEAD CORE 80H
R40	0370-0000-4651	79PZ0117	CHIP BEAD CORE 80H
R72	0370-0000-2143	79PZ0115	CHIP BEAD CORE 600H
R73	0370-0000-2143	79PZ0115	CHIP BEAD CORE 600H

*** ELECTRICAL PARTS & MISCELLANEOUS PARTS ***

ADAP	0300-7012-4414	79PZ0015	AC TO DC ADAPTOR (LSE9901
F1	0182-1502-3703	79PZ0108	PICO FUSE 125V 5A 3*7MM
LCD	0211-0190-0165	79PZ0004	LCD MODULE 19.0 TFT FLC4"
POWCD	0320-4000-0080	79PZ0160	POWER CORD 2000MM 110V UL
SCSUB	0321-0000-0100	79PZ0018	S.CABLE 2000MM 15(3R-3R)

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
WHFI	0460-3430-0130	79PZ0007	WH FI-X30S-H/DF14-30S 157
WHPH8	0460-1008-0110	79PZ0005	WH PH8P-PH8P 1007#24 65MM
WHPH9	0460-1009-0210	79PZ0006	WH PH9P-PH9P 1061#26 190M
XR02	0280-1100-0013	79PZ0110	X'TAL 11.0592MHZ

*** APPEARANCE PARTS ***

BACA	1701-0507-9000	79PZ0163	BASE CAB. LCD1920NX
BACO	1801-0204-6000	79PZ0166	BACK COVER CAB. LCD1920NX
BAFO	1701-1000-0071	79PZ0032	BASE FOOT (18.0*3.0T)
BARO	1712-0100-3120	79PZ0003	BASE ROTATE LCD1920NX
HICO	1701-1901-8000	79PZ0164	HINGE COVER LCD1920NX
PACA	1801-0110-1010	79PZ0165	PANEL CAB. LCD1920NX (NEC
POWBU	1701-0409-4000	79PZ0162	POWER BUTTON LCD1920NX

*** PRINTED & PACKING MATERIALS ***

BALB	1936-1100-4070	79PZ0170	BACK LBL LCD1920NX AN NEC
CARD	1925-1900-0010	79PZ0028	CARDBOARD FOR NMV
CART	1925-1200-3640	79PZ0167	CARTON LCD1920NX AN NEC
CUBO	1925-1000-1180	79PZ0020	CUSHION BOTTOM (EPS) LCD1
CUTO	1925-1000-1170	79PZ0019	CUSHION TOP (EPS) LCD1920
MANU	1925-1300-3660	79PZ0168	MANUAL LCD1920NX AN/ANBK
PEBAG3	1925-1100-0230	79PZ0022	PE BAG 320*230*0.04T
PEBAG5	1925-1100-0420	79PZ0021	PE BAG 550*800*0.04T
SETU	1925-1400-0920	79PZ0169	SETUP SHEET LCD1920NX AN/

*** RESISTORS ***

D04	0130-0000-1859	79PZ0063	RES. CF 0.0H 1/4W J
D10	0130-4708-1859	79PZ0097	RES. CF 4.7H 1/4W J
L03	0130-2208-1858	79PZ0083	RES. CF 2.2H 1/8W J
L04	0130-0000-1858	79PZ0062	RES. CF 0.0H 1/8W J
L09	0130-1000-1858	79PZ0065	RES. CF 100H 1/8W J
PR13	0141-4700-3851	79PZ0106	ARRAY RES. A(X) 470H 4R J
PR14	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR27	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR28	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR29	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR30	0141-1009-3851	79PZ0105	ARRAY RES. A(X) 10H 4R J
PR31	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR32	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR51	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR52	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR53	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR54	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR55	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR56	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR57	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR58	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR59	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
PR60	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR61	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR62	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA17	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA18	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA21	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA22	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA25	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA26	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
R02	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R05	0130-7500-0055	79PZ0101	RES. CF 750H 1/10W J
R06	0130-5100-0055	79PZ0099	RES. CF 510H 1/10W J
R07	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R08	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R09	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R10	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R100	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R101	0130-9109-0055	79PZ0102	RES. CF 91H 1/10W J
R103	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R104	0130-4302-0055	79PZ0094	RES. CF 43K 1/10W J
R105	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R106	0130-2202-0055	79PZ0080	RES. CF 22K 1/10W J
R107	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R109	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R11	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R110	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R111	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R112	0130-4302-0055	79PZ0094	RES. CF 43K 1/10W J
R114	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R115	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R116	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R119	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R12	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R121	0130-2700-0055	79PZ0086	RES. CF 270H 1/10W J
R122	0130-2700-0055	79PZ0086	RES. CF 270H 1/10W J
R123	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R124	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R125	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R126	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R127	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R128	0130-2700-0055	79PZ0086	RES. CF 270H 1/10W J
R130	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R132	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R133	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R135	0130-1000-0055	79PZ0064	RES. CF 100H 1/10W J
R138	0130-1002-1859	79PZ0068	RES. CF 10K 1/4W J
R14	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R140	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
R142	0130-3901-0055	79PZ0093	RES. CF 3.9K 1/10W J
R143	0130-2401-0055	79PZ0085	RES. CF 2.4K 1/10W J
R144	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R145	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R146	0130-2200-0055	79PZ0077	RES. CF 220H 1/10W J
R147	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R148	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R149	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R15	0130-2203-0055	79PZ0081	RES. CF 220K 1/10W J
R150	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R151	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R152	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R154	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R157	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R158	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R159	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R16	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R160	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R161	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R162	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R163	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R164	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R165	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R166	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R167	0130-2208-0055	79PZ0082	RES. CF 2.2H 1/10W J
R168	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R169	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R17	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R170	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R171	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R172	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R173	0130-1000-0055	79PZ0064	RES. CF 100H 1/10W J
R174	0130-0000-1858	79PZ0062	RES. CF 0.0H 1/8W J
R175	0130-2208-0055	79PZ0082	RES. CF 2.2H 1/10W J
R176	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R178	0130-0000-1858	79PZ0062	RES. CF 0.0H 1/8W J
R18	0130-2202-0055	79PZ0080	RES. CF 22K 1/10W J
R180	0130-3300-0055	79PZ0089	RES. CF 330H 1/10W J
R182	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R183	0130-5609-0055	79PZ0100	RES. CF 56H 1/10W J
R184	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R185	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R187	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R189	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R19	0130-1000-0055	79PZ0064	RES. CF 100H 1/10W J
R190	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R192	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R194	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
R196	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R197	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R198	0130-2200-0055	79PZ0077	RES. CF 220H 1/10W J
R199	0130-1200-0055	79PZ0071	RES. CF 120H 1/10W J
R202	0130-2200-1450	79PZ0078	RES. CF 220H 1/4W J A
R203	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R204	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R205	0130-2001-0055	79PZ0075	RES. CF 2K 1/10W J
R206	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R207	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R209	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R21	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R210	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R211	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R212	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R213	0130-3309-1859	79PZ0092	RES. CF 33H 1/8W J
R214	0130-3309-1859	79PZ0092	RES. CF 33H 1/8W J
R215	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R216	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R217	0130-1500-1250	79PZ0073	RES. CF 150H 1/2W J A
R23	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R24	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R25	0130-2703-0055	79PZ0087	RES. CF 270K 1/10W J
R29	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R30	0131-0000-0015	79PZ0103	RES. MF 0.0H 1/10W F
R32	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R33	0130-2703-0055	79PZ0087	RES. CF 270K 1/10W J
R34	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R35	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R36	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R38	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R41	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R42	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R43	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R44	0130-5100-0055	79PZ0099	RES. CF 510H 1/10W J
R45	0130-1000-0055	79PZ0064	RES. CF 100H 1/10W J
R46	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R47	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R48	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R49	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R50	0130-3001-0055	79PZ0088	RES. CF 3.0K 1/10W J
R52	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R54	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R55	0130-2002-0055	79PZ0076	RES. CF 20K 1/10W J
R56	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R59	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R60	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R61	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
R64	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R65	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R66	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R68	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R69	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R70	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R71	0130-1003-0055	79PZ0069	RES. CF 100K 1/10W J
R74	0130-3303-0055	79PZ0091	RES. CF 330K 1/10W J
R75	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R76	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R77	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R79	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R80	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R82	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R84	0130-2700-0055	79PZ0086	RES. CF 270H 1/10W J
R86	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R87	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R88	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R89	0130-2202-0055	79PZ0080	RES. CF 22K 1/10W J
R95	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R96	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R97	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R98	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R99	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J

*** CAPACITORS ***

C01	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C02	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C03	0111-3221-5106	79PZ0054	C/M MULTI 220PF 50V NPO
C04	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C05	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C06	0111-3200-5106	79PZ0052	C/M MULTI. 20PF 50V NPO
C07	0111-3200-5106	79PZ0052	C/M MULTI. 20PF 50V NPO
C10	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C101	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C103	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C104	0111-3221-5106	79PZ0054	C/M MULTI 220PF 50V NPO
C106	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C107	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C108	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C109	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C110	0101-4331-1310	79PZ0043	E/C H-R 330UF 25V 105' N-
C114	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C115	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C116	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C117	0111-3100-5106	79PZ0048	C/M MULTI. 10PF 50V NPO
C118	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C119	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
C12	0101-1471-1311	79PZ0042	E/C GEN. 470UF 25V 105' F
C124	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C127	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C129	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C130	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C131	0101-1471-1211	79PZ0041	E/C GEN. 470UF 16V 105' F
C132	0101-1471-1211	79PZ0041	E/C GEN. 470UF 16V 105' F
C133	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C134	0101-1471-1211	79PZ0041	E/C GEN. 470UF 16V 105' F
C135	0101-1471-1211	79PZ0041	E/C GEN. 470UF 16V 105' F
C136	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C137	0101-7100-1214	79PZ0044	E/C CHIP TYPE 10UF 16V 10
C138	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C139	0101-7100-1214	79PZ0044	E/C CHIP TYPE 10UF 16V 10
C14	0111-3471-5106	79PZ0060	C/M MULTI 470PF 50V NPO
C140	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C141	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C142	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C143	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C144	0101-7220-1214	79PZ0046	E/C CHIP TYPE 22UF 16V 10
C145	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C149	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C15	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C150	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C152	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C153	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C154	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C157	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C158	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C159	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C16	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C160	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C161	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C162	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C163	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C164	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C165	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C166	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C167	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C168	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C169	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C17	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C170	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C171	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C172	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C175	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C176	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C177	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
C178	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C179	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C18	0111-3100-5106	79PZ0048	C/M MULTI. 10PF 50V NPO
C180	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C181	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C182	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C183	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C184	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C185	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C186	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C187	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C188	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C189	0111-3221-5106	79PZ0054	C/M MULTI 220PF 50V NPO
C19	0101-7109-1514	79PZ0045	E/C CHIP TYPE 1UF 50V 105
C198	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C199	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C20	0111-3332-5116	79PZ0056	C/M MULTI. 3300PF 50V X7R
C200	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C201	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C202	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C203	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C204	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C205	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C206	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C207	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C208	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C209	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C21	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C210	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C211	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C23	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C24	0101-4331-1310	79PZ0043	E/C H-R 330UF 25V 105' N-
C25	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C27	0111-3270-5106	79PZ0055	C/M MULTI. 27PF 50V NPO
C30	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C31	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C32	0111-3100-5106	79PZ0048	C/M MULTI. 10PF 50V NPO
C33	0111-3101-5106	79PZ0049	C/M MULTI. 100PF 50V NPO
C35	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C36	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C37	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C38	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C39	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C40	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C41	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C42	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C43	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C44	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
C45	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C46	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C47	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C48	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C49	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C50	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C51	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C52	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C53	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C54	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C55	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C56	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C57	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C58	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C59	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C60	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C61	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C62	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C63	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C64	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C65	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C66	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C67	0111-3471-5106	79PZ0060	C/M MULTI 470PF 50V NPO
C69	0101-7470-1114	79PZ0047	E/C CHIP TYPE 47UF 10V 10
C70	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C71	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C72	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C73	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C74	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C77	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C78	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C79	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C80	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C81	0111-3393-1616	79PZ0058	C/M MULTI 0.039UF 16V X7R
C82	0111-3392-5116	79PZ0057	C/M MULTI 3900PF 50V X7R
C83	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C84	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C85	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C86	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C89	0111-3221-5106	79PZ0054	C/M MULTI 220PF 50V NPO
C91	0111-3200-5106	79PZ0052	C/M MULTI. 20PF 50V NPO
C92	0111-3200-5106	79PZ0052	C/M MULTI. 20PF 50V NPO
C93	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C94	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C95	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C96	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C97	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C98	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
C99	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO

REPLACEMENT PARTS LIST

The components specified for Model LCD1920NX-BK(A)

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
*** ICS ***			
IC01	0430-8000-3846	79PZ0154	IC AD9884AKS-140 SMD 128P
IC02	0430-7007-4939	79PZ0151	IC AM121-2 SMD 160 PIN
IC03	0430-7000-6015	79PZ0148	IC TLC2933IPWR SMD 14PIN
IC04	0430-7007-7040	79PZ0152	IC MTV118P-49 16PIN
IC06	0430-1004-1035	79PZ0141	IC 74F153SC SMD 16PIN
IC07X	0990-0000-4400	79PZ0156	S/W RDT191S EEPROM(IC07)
IC08	0430-6002-0007	79PZ0146	IC LD1117S-ADJ SMD
IC09	0430-1003-3635	79PZ0138	IC 74LCX245MTCX SMD 20PIN
IC11	0430-7007-9738	79PZ0153	IC SII153BCT100 SMD 100PI
IC12	0430-0000-6004	79PZ0133	IC CD4049UBM SMD 16PIN
IC14	0430-3001-1011	79PZ0144	IC AT24C02N-10SC-2.7 SMD
IC15	0430-1003-0035	79PZ0137	IC DM74LS14MX SMD 14PIN
IC16	0430-0000-8035	79PZ0134	IC MM74HC4053WMX SMD 16PI
IC17	0430-1004-0635	79PZ0140	IC DM74LS86 SMD 14PIN
IC18	0420-1001-3601	79PZ0132	POWER MOS IRF7304 SMD 8PI
IC19	0420-1001-3601	79PZ0132	POWER MOS IRF7304 SMD 8PI
IC20	0430-4000-2004	79PZ0145	IC LM339M SMD-14 T
IC21	0420-1001-3601	79PZ0132	POWER MOS IRF7304 SMD 8PI
IC22	0420-1001-3601	79PZ0132	POWER MOS IRF7304 SMD 8PI
IC23	0430-1000-7035	79PZ0135	IC 74HC14 SMD 14PIN
IC24X	0990-0000-4500	79PZ0157	S/W RDT191S EEPROM(IC24)
IC25X	0990-2000-4406	79PZ0161	SOFTWARE LCD1920NX CPU:NE
IC26	0430-3000-2017	79PZ0143	IC MP24LC21AT/SN SMD 8PIN
IC27	0430-1000-8035	79PZ0136	IC MM74HC74AMX SMD 14PIN
IC28	0430-1000-7035	79PZ0135	IC 74HC14 SMD 14PIN
IC29	0430-1003-8635	79PZ0139	IC MM74HC08 SMD 14PIN
IC30	0430-1005-2035	79PZ0142	IC 74VHC32 SMD 14PIN
IC31	0430-6002-5051	79PZ0147	IC AMC7588-ADJ SMD 3PIN
IC33	0430-1000-8035	79PZ0136	IC MM74HC74AMX SMD 14PIN
IC34	0430-1003-8635	79PZ0139	IC MM74HC08 SMD 14PIN
IC36	0430-7003-7650	79PZ0149	IC THC63LVDM83A SMD 56PIN
IC37	0430-7003-7650	79PZ0149	IC THC63LVDM83A SMD 56PIN
Q30	0430-7004-4319	79PZ0150	IC PST994D TO-92 3PIN D=4
*** TRANSISTORS ***			
Q01	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q02	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q03	0410-5000-2610	79PZ0131	TRANSISTOR MMBT3906LT1 SM
Q04	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q05	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q06	0410-0000-2106	79PZ0129	TRANSISTOR 2SA673AC TO-92

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
Q08	0410-0000-2106	79PZ0129	TRANSISTOR 2SA673AC TO-92
Q09	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q10	0410-0000-2106	79PZ0129	TRANSISTOR 2SA673AC TO-92
Q11	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q12	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q13	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q14	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q16	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q19	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q25	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM

*** DIODES ***

D01	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D02	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D05	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D06	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D07	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D08	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D09	0390-5001-8293	79PZ0123	DUAL SURFACE DIODES BAV70
D11	0400-0541-2012	79PZ0128	ZENER RLZ5.6B 5.45V~5.73V
D115	0390-5000-4202	79PZ0122	GEN. DIODE 1N4004F T
D116	0390-6000-1012	79PZ0125	SCHOTTKY DIODE 11DQ06 T
D12	0400-0541-2012	79PZ0128	ZENER RLZ5.6B 5.45V~5.73V
D13	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D14	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D15	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D17	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D18	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D19	0390-6000-9172	79PZ0126	SCHOTTKY DIODE SB340 T
D20	0390-6000-9172	79PZ0126	SCHOTTKY DIODE SB340 T
D24	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D26	0390-5001-8293	79PZ0123	DUAL SURFACE DIODES BAV70
D27	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D28	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D31	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
LED01	0440-5000-0020	79PZ0155	LED L-59GYW 5
ZD03	0400-0511-2000	79PZ0127	ZENER 5C3 5.1-5.3V 1/2W
ZD04	0400-0511-2000	79PZ0127	ZENER 5C3 5.1-5.3V 1/2W

*** RELAYS & SWITCHES ***

SW1	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P
SW2	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P
SW3	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P
SW4	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P
SW5	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P

*** PWB ASSYS ***

DISBD	3190-0032-0156	79PZ0013	LCD DISPLAY BD ASS'Y

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
INV	0500-0105-0302	79PZ0008	INVERTER DC-AC T65I008.00
MAINBD	3190-0142-0150	79PZ0014	LCD MAIN BD ASS'Y

*** COILS & FILTERS ***

L01	0370-0000-1010	79PZ0113	FERRITE CORE RH 3.5X6X1.0
L02	0370-0000-1010	79PZ0113	FERRITE CORE RH 3.5X6X1.0
L05	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L06	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L07	0370-0000-1110	79PZ0114	FERRITE CORE W8 R6H 6X10
L08	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L11	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L16	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L160	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L161	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L20	0370-0000-3552	79PZ0116	CHIP BEAD CORE 30H
L21	0370-0000-3552	79PZ0116	CHIP BEAD CORE 30H
L22	0370-0000-3552	79PZ0116	CHIP BEAD CORE 30H
L23	0370-0000-5842	79PZ0118	CHIP BEAD CORE 40H
L24	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L25	0370-0000-5942	79PZ0119	CHIP BEAD CORE 60H
L26	0370-0000-5842	79PZ0118	CHIP BEAD CORE 40H
L32	0370-0000-1110	79PZ0114	FERRITE CORE W8 R6H 6X10
L33	0361-1000-0120	79PZ0112	DRUM CORE L:70UH 2A(10*16
L34	0361-1000-0120	79PZ0112	DRUM CORE L:70UH 2A(10*16
L35	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
PRA01	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA02	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA05	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA06	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA09	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA10	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB03	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB04	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB07	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB08	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB11	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB12	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
R39	0370-0000-4651	79PZ0117	CHIP BEAD CORE 80H
R40	0370-0000-4651	79PZ0117	CHIP BEAD CORE 80H
R72	0370-0000-2143	79PZ0115	CHIP BEAD CORE 600H
R73	0370-0000-2143	79PZ0115	CHIP BEAD CORE 600H

*** ELECTRICAL PARTS & MISCELLANEOUS PARTS ***

ADAP	0300-7012-4414	79PZ0015	AC TO DC ADAPTOR (LSE9901
F1	0182-1502-3703	79PZ0108	PICO FUSE 125V 5A 3*7MM
LCD	0211-0190-0165	79PZ0004	LCD MODULE 19.0 TFT FLC4"
POWCD	0320-4000-0080	79PZ0160	POWER CORD 2000MM 110V UL
SCSUB	0321-0000-0100	79PZ0018	S.CABLE 2000MM 15(3R-3R)

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
WHFI	0460-3430-0130	79PZ0007	WH FI-X30S-H/DF14-30S 157
WHPH8	0460-1008-0110	79PZ0005	WH PH8P-PH8P 1007#24 65MM
WHPH9	0460-1009-0210	79PZ0006	WH PH9P-PH9P 1061#26 190M
XR02	0280-1100-0013	79PZ0110	X'TAL 11.0592MHZ

*** APPEARANCE PARTS ***

BACA	1701-0507-9010	79PZ0001	BASE CAB. LCD1920NX
BACO	1801-0204-6010	79PZ0172	BACK COVER CAB. LCD1920NX
BAFO	1701-1000-0071	79PZ0032	BASE FOOT (18.0*3.0T)
BARO	1712-0100-3120	79PZ0003	BASE ROTATE LCD1920NX
HICO	1701-1901-8010	79PZ0010	HINGE COVER LCD1920NX (
PACA	1801-0110-1020	79PZ0171	PANEL CAB. LCD1920NX (NEC
POWBU	1701-0409-4010	79PZ0009	POWER BUTTON LCD1920NX

*** PRINTED & PACKING MATERIALS ***

BALB	1936-1100-4080	79PZ0174	BACK LBL LCD1920NX ANBK N
CARD	1925-1900-0010	79PZ0028	CARDBOARD FOR NMV
CART	1925-1200-36501	79PZ0173	CARTON LCD1920NX ANBK NEC
CUBO	1925-1000-1180	79PZ0020	CUSHION BOTTOM (EPS) LCD1
CUTO	1925-1000-1170	79PZ0019	CUSHION TOP (EPS) LCD1920
MANU	1925-1300-3660	79PZ0168	MANUAL LCD1920NX AN/ANBK
PEBAG3	1925-1100-0230	79PZ0022	PE BAG 320*230*0.04T
PEBAG5	1925-1100-0420	79PZ0021	PE BAG 550*800*0.04T
SETU	1925-1400-0920	79PZ0169	SETUP SHEET LCD1920NX AN/

*** RESISTORS ***

D04	0130-0000-1859	79PZ0063	RES. CF 0.0H 1/4W J
D10	0130-4708-1859	79PZ0097	RES. CF 4.7H 1/4W J
L03	0130-2208-1858	79PZ0083	RES. CF 2.2H 1/8W J
L04	0130-0000-1858	79PZ0062	RES. CF 0.0H 1/8W J
L09	0130-1000-1858	79PZ0065	RES. CF 100H 1/8W J
PR13	0141-4700-3851	79PZ0106	ARRAY RES. A(X) 470H 4R J
PR14	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR27	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR28	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR29	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR30	0141-1009-3851	79PZ0105	ARRAY RES. A(X) 10H 4R J
PR31	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR32	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR51	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR52	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR53	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR54	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR55	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR56	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR57	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR58	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR59	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
PR60	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR61	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR62	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA17	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA18	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA21	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA22	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA25	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA26	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
R02	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R05	0130-7500-0055	79PZ0101	RES. CF 750H 1/10W J
R06	0130-5100-0055	79PZ0099	RES. CF 510H 1/10W J
R07	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R08	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R09	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R10	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R100	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R101	0130-9109-0055	79PZ0102	RES. CF 91H 1/10W J
R103	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R104	0130-4302-0055	79PZ0094	RES. CF 43K 1/10W J
R105	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R106	0130-2202-0055	79PZ0080	RES. CF 22K 1/10W J
R107	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R109	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R11	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R110	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R111	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R112	0130-4302-0055	79PZ0094	RES. CF 43K 1/10W J
R114	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R115	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R116	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R119	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R12	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R121	0130-2700-0055	79PZ0086	RES. CF 270H 1/10W J
R122	0130-2700-0055	79PZ0086	RES. CF 270H 1/10W J
R123	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R124	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R125	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R126	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R127	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R128	0130-2700-0055	79PZ0086	RES. CF 270H 1/10W J
R130	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R132	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R133	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R135	0130-1000-0055	79PZ0064	RES. CF 100H 1/10W J
R138	0130-1002-1859	79PZ0068	RES. CF 10K 1/4W J
R14	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R140	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
R142	0130-3901-0055	79PZ0093	RES. CF 3.9K 1/10W J
R143	0130-2401-0055	79PZ0085	RES. CF 2.4K 1/10W J
R144	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R145	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R146	0130-2200-0055	79PZ0077	RES. CF 220H 1/10W J
R147	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R148	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R149	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R15	0130-2203-0055	79PZ0081	RES. CF 220K 1/10W J
R150	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R151	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R152	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R154	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R157	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R158	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R159	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R16	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R160	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R161	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R162	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R163	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R164	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R165	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R166	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R167	0130-2208-0055	79PZ0082	RES. CF 2.2H 1/10W J
R168	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R169	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R17	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R170	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R171	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R172	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R173	0130-1000-0055	79PZ0064	RES. CF 100H 1/10W J
R174	0130-0000-1858	79PZ0062	RES. CF 0.0H 1/8W J
R175	0130-2208-0055	79PZ0082	RES. CF 2.2H 1/10W J
R176	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R178	0130-0000-1858	79PZ0062	RES. CF 0.0H 1/8W J
R18	0130-2202-0055	79PZ0080	RES. CF 22K 1/10W J
R180	0130-3300-0055	79PZ0089	RES. CF 330H 1/10W J
R182	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R183	0130-5609-0055	79PZ0100	RES. CF 56H 1/10W J
R184	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R185	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R187	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R189	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R19	0130-1000-0055	79PZ0064	RES. CF 100H 1/10W J
R190	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R192	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R194	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
R196	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R197	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R198	0130-2200-0055	79PZ0077	RES. CF 220H 1/10W J
R199	0130-1200-0055	79PZ0071	RES. CF 120H 1/10W J
R202	0130-2200-1450	79PZ0078	RES. CF 220H 1/4W J A
R203	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R204	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R205	0130-2001-0055	79PZ0075	RES. CF 2K 1/10W J
R206	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R207	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R209	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R21	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R210	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R211	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R212	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R213	0130-3309-1859	79PZ0092	RES. CF 33H 1/8W J
R214	0130-3309-1859	79PZ0092	RES. CF 33H 1/8W J
R215	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R216	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R217	0130-1500-1250	79PZ0073	RES. CF 150H 1/2W J A
R23	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R24	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R25	0130-2703-0055	79PZ0087	RES. CF 270K 1/10W J
R29	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R30	0131-0000-0015	79PZ0103	RES. MF 0.0H 1/10W F
R32	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R33	0130-2703-0055	79PZ0087	RES. CF 270K 1/10W J
R34	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R35	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R36	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R38	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R41	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R42	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R43	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R44	0130-5100-0055	79PZ0099	RES. CF 510H 1/10W J
R45	0130-1000-0055	79PZ0064	RES. CF 100H 1/10W J
R46	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R47	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R48	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R49	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R50	0130-3001-0055	79PZ0088	RES. CF 3.0K 1/10W J
R52	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R54	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R55	0130-2002-0055	79PZ0076	RES. CF 20K 1/10W J
R56	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R59	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R60	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R61	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
R64	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R65	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R66	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R68	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R69	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R70	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R71	0130-1003-0055	79PZ0069	RES. CF 100K 1/10W J
R74	0130-3303-0055	79PZ0091	RES. CF 330K 1/10W J
R75	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R76	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R77	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R79	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R80	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R82	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R84	0130-2700-0055	79PZ0086	RES. CF 270H 1/10W J
R86	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R87	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R88	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R89	0130-2202-0055	79PZ0080	RES. CF 22K 1/10W J
R95	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R96	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R97	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R98	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R99	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J

*** CAPACITORS ***

C01	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C02	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C03	0111-3221-5106	79PZ0054	C/M MULTI 220PF 50V NPO
C04	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C05	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C06	0111-3200-5106	79PZ0052	C/M MULTI. 20PF 50V NPO
C07	0111-3200-5106	79PZ0052	C/M MULTI. 20PF 50V NPO
C10	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C101	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C103	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C104	0111-3221-5106	79PZ0054	C/M MULTI 220PF 50V NPO
C106	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C107	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C108	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C109	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C110	0101-4331-1310	79PZ0043	E/C H-R 330UF 25V 105' N-
C114	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C115	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C116	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C117	0111-3100-5106	79PZ0048	C/M MULTI. 10PF 50V NPO
C118	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C119	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
C12	0101-1471-1311	79PZ0042	E/C GEN. 470UF 25V 105' F
C124	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C127	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C129	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C130	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C131	0101-1471-1211	79PZ0041	E/C GEN. 470UF 16V 105' F
C132	0101-1471-1211	79PZ0041	E/C GEN. 470UF 16V 105' F
C133	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C134	0101-1471-1211	79PZ0041	E/C GEN. 470UF 16V 105' F
C135	0101-1471-1211	79PZ0041	E/C GEN. 470UF 16V 105' F
C136	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C137	0101-7100-1214	79PZ0044	E/C CHIP TYPE 10UF 16V 10
C138	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C139	0101-7100-1214	79PZ0044	E/C CHIP TYPE 10UF 16V 10
C14	0111-3471-5106	79PZ0060	C/M MULTI 470PF 50V NPO
C140	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C141	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C142	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C143	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C144	0101-7220-1214	79PZ0046	E/C CHIP TYPE 22UF 16V 10
C145	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C149	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C15	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C150	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C152	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C153	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C154	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C157	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C158	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C159	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C16	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C160	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C161	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C162	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C163	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C164	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C165	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C166	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C167	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C168	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C169	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C17	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C170	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C171	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C172	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C175	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C176	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C177	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
C178	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C179	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C18	0111-3100-5106	79PZ0048	C/M MULTI. 10PF 50V NPO
C180	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C181	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C182	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C183	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C184	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C185	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C186	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C187	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C188	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C189	0111-3221-5106	79PZ0054	C/M MULTI 220PF 50V NPO
C19	0101-7109-1514	79PZ0045	E/C CHIP TYPE 1UF 50V 105
C198	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C199	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C20	0111-3332-5116	79PZ0056	C/M MULTI. 3300PF 50V X7R
C200	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C201	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C202	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C203	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C204	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C205	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C206	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C207	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C208	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C209	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C21	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C210	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C211	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C23	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C24	0101-4331-1310	79PZ0043	E/C H-R 330UF 25V 105' N-
C25	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C27	0111-3270-5106	79PZ0055	C/M MULTI. 27PF 50V NPO
C30	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C31	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C32	0111-3100-5106	79PZ0048	C/M MULTI. 10PF 50V NPO
C33	0111-3101-5106	79PZ0049	C/M MULTI. 100PF 50V NPO
C35	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C36	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C37	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C38	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C39	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C40	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C41	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C42	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C43	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C44	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
C45	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C46	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C47	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C48	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C49	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C50	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C51	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C52	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C53	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C54	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C55	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C56	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C57	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C58	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C59	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C60	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C61	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C62	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C63	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C64	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C65	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C66	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C67	0111-3471-5106	79PZ0060	C/M MULTI 470PF 50V NPO
C69	0101-7470-1114	79PZ0047	E/C CHIP TYPE 47UF 10V 10
C70	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C71	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C72	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C73	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C74	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C77	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C78	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C79	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C80	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C81	0111-3393-1616	79PZ0058	C/M MULTI 0.039UF 16V X7R
C82	0111-3392-5116	79PZ0057	C/M MULTI 3900PF 50V X7R
C83	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C84	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C85	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C86	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C89	0111-3221-5106	79PZ0054	C/M MULTI 220PF 50V NPO
C91	0111-3200-5106	79PZ0052	C/M MULTI. 20PF 50V NPO
C92	0111-3200-5106	79PZ0052	C/M MULTI. 20PF 50V NPO
C93	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C94	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C95	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C96	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C97	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C98	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
C99	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO

REPLACEMENT PARTS LIST

The components specified for Model LCD1920NX(B)

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
*** ICS ***			
IC01	0430-8000-3846	79PZ0154	IC AD9884AKS-140 SMD 128P
IC02	0430-7007-4939	79PZ0151	IC AM121-2 SMD 160 PIN
IC03	0430-7000-6015	79PZ0148	IC TLC2933IPWR SMD 14PIN
IC04	0430-7007-7040	79PZ0152	IC MTV118P-49 16PIN
IC06	0430-1004-1035	79PZ0141	IC 74F153SC SMD 16PIN
IC07X	0990-0000-4400	79PZ0156	S/W RDT191S EEPROM(IC07)
IC08	0430-6002-0007	79PZ0146	IC LD1117S-ADJ SMD
IC09	0430-1003-3635	79PZ0138	IC 74LCX245MTCX SMD 20PIN
IC11	0430-7007-9738	79PZ0153	IC SII153BCT100 SMD 100PI
IC12	0430-0000-6004	79PZ0133	IC CD4049UBM SMD 16PIN
IC14	0430-3001-1011	79PZ0144	IC AT24C02N-10SC-2.7 SMD
IC15	0430-1003-0035	79PZ0137	IC DM74LS14MX SMD 14PIN
IC16	0430-0000-8035	79PZ0134	IC MM74HC4053WMX SMD 16PI
IC17	0430-1004-0635	79PZ0140	IC DM74LS86 SMD 14PIN
IC18	0420-1001-3601	79PZ0132	POWER MOS IRF7304 SMD 8PI
IC19	0420-1001-3601	79PZ0132	POWER MOS IRF7304 SMD 8PI
IC20	0430-4000-2004	79PZ0145	IC LM339M SMD-14 T
IC21	0420-1001-3601	79PZ0132	POWER MOS IRF7304 SMD 8PI
IC22	0420-1001-3601	79PZ0132	POWER MOS IRF7304 SMD 8PI
IC23	0430-1000-7035	79PZ0135	IC 74HC14 SMD 14PIN
IC24X	0990-0000-4500	79PZ0157	S/W RDT191S EEPROM(IC24)
IC25X	0990-2000-4406	79PZ0161	SOFTWARE LCD1920NX CPU:NE
IC26	0430-3000-2017	79PZ0143	IC MP24LC21AT/SN SMD 8PIN
IC27	0430-1000-8035	79PZ0136	IC MM74HC74AMX SMD 14PIN
IC28	0430-1000-7035	79PZ0135	IC 74HC14 SMD 14PIN
IC29	0430-1003-8635	79PZ0139	IC MM74HC08 SMD 14PIN
IC30	0430-1005-2035	79PZ0142	IC 74VHC32 SMD 14PIN
IC31	0430-6002-5051	79PZ0147	IC AMC7588-ADJ SMD 3PIN
IC33	0430-1000-8035	79PZ0136	IC MM74HC74AMX SMD 14PIN
IC34	0430-1003-8635	79PZ0139	IC MM74HC08 SMD 14PIN
IC36	0430-7003-7650	79PZ0149	IC THC63LVDM83A SMD 56PIN
IC37	0430-7003-7650	79PZ0149	IC THC63LVDM83A SMD 56PIN
Q30	0430-7004-4319	79PZ0150	IC PST994D TO-92 3PIN D=4
*** TRANSISTORS ***			
Q01	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q02	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q03	0410-5000-2610	79PZ0131	TRANSISTOR MMBT3906LT1 SM
Q04	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q05	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q06	0410-0000-2106	79PZ0129	TRANSISTOR 2SA673AC TO-92

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
Q08	0410-0000-2106	79PZ0129	TRANSISTOR 2SA673AC TO-92
Q09	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q10	0410-0000-2106	79PZ0129	TRANSISTOR 2SA673AC TO-92
Q11	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q12	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q13	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q14	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q16	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q19	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q25	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM

*** DIODES ***

D01	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D02	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D05	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D06	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D07	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D08	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D09	0390-5001-8293	79PZ0123	DUAL SURFACE DIODES BAV70
D11	0400-0541-2012	79PZ0128	ZENER RLZ5.6B 5.45V~5.73V
D115	0390-5000-4202	79PZ0122	GEN. DIODE 1N4004F T
D116	0390-6000-1012	79PZ0125	SCHOTTKY DIODE 11DQ06 T
D12	0400-0541-2012	79PZ0128	ZENER RLZ5.6B 5.45V~5.73V
D13	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D14	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D15	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D17	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D18	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D19	0390-6000-9172	79PZ0126	SCHOTTKY DIODE SB340 T
D20	0390-6000-9172	79PZ0126	SCHOTTKY DIODE SB340 T
D24	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D26	0390-5001-8293	79PZ0123	DUAL SURFACE DIODES BAV70
D27	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D28	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D31	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
LED01	0440-5000-0020	79PZ0155	LED L-59GYW 5
ZD03	0400-0511-2000	79PZ0127	ZENER 5C3 5.1-5.3V 1/2W
ZD04	0400-0511-2000	79PZ0127	ZENER 5C3 5.1-5.3V 1/2W

*** RELAYS & SWITCHES ***

SW1	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P
SW2	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P
SW3	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P
SW4	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P
SW5	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P

*** PWB ASSYS ***

DISBD	3190-0032-0156	79PZ0013	LCD DISPLAY BD ASS'Y

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
INV	0500-0105-0302	79PZ0008	INVERTER DC-AC T65I008.00
MAINBD	3190-0142-0150	79PZ0014	LCD MAIN BD ASS'Y

*** COILS & FILTERS ***

L01	0370-0000-1010	79PZ0113	FERRITE CORE RH 3.5X6X1.0
L02	0370-0000-1010	79PZ0113	FERRITE CORE RH 3.5X6X1.0
L05	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L06	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L07	0370-0000-1110	79PZ0114	FERRITE CORE W8 R6H 6X10
L08	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L11	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L16	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L160	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L161	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L20	0370-0000-3552	79PZ0116	CHIP BEAD CORE 30H
L21	0370-0000-3552	79PZ0116	CHIP BEAD CORE 30H
L22	0370-0000-3552	79PZ0116	CHIP BEAD CORE 30H
L23	0370-0000-5842	79PZ0118	CHIP BEAD CORE 40H
L24	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L25	0370-0000-5942	79PZ0119	CHIP BEAD CORE 60H
L26	0370-0000-5842	79PZ0118	CHIP BEAD CORE 40H
L32	0370-0000-1110	79PZ0114	FERRITE CORE W8 R6H 6X10
L33	0361-1000-0120	79PZ0112	DRUM CORE L:70UH 2A(10*16
L34	0361-1000-0120	79PZ0112	DRUM CORE L:70UH 2A(10*16
L35	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
PRA01	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA02	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA05	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA06	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA09	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA10	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB03	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB04	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB07	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB08	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB11	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB12	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
R39	0370-0000-4651	79PZ0117	CHIP BEAD CORE 80H
R40	0370-0000-4651	79PZ0117	CHIP BEAD CORE 80H
R72	0370-0000-2143	79PZ0115	CHIP BEAD CORE 600H
R73	0370-0000-2143	79PZ0115	CHIP BEAD CORE 600H

*** ELECTRICAL PARTS & MISCELLANEOUS PARTS ***

ADAP	0300-7012-4414	79PZ0015	AC TO DC ADAPTOR (LSE9901
F1	0182-1502-3703	79PZ0108	PICO FUSE 125V 5A 3*7MM
LCD	0211-0190-0165	79PZ0004	LCD MODULE 19.0 TFT FLC4"
POWCD	0320-3000-0050	79PZ0175	POWER CORD 2000MM 220V VD
SCSUB	0321-0000-0100	79PZ0018	S.CABLE 2000MM 15(3R-3R)

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
WHFI	0460-3430-0130	79PZ0007	WH FI-X30S-H/DF14-30S 157
WHPH8	0460-1008-0110	79PZ0005	WH PH8P-PH8P 1007#24 65MM
WHPH9	0460-1009-0210	79PZ0006	WH PH9P-PH9P 1061#26 190M
XR02	0280-1100-0013	79PZ0110	X'TAL 11.0592MHZ

*** APPEARANCE PARTS ***

BACA	1701-0507-9000	79PZ0163	BASE CAB. LCD1920NX
BACO	1801-0204-6000	79PZ0166	BACK COVER CAB. LCD1920NX
BAFO	1701-1000-0071	79PZ0032	BASE FOOT (18.0*3.0T)
BARO	1712-0100-3120	79PZ0003	BASE ROTATE LCD1920NX
HICO	1701-1901-8000	79PZ0164	HINGE COVER LCD1920NX
PACA	1801-0110-1010	79PZ0165	PANEL CAB. LCD1920NX (NEC
POWBU	1701-0409-4000	79PZ0162	POWER BUTTON LCD1920NX

*** PRINTED & PACKING MATERIALS ***

ADDR	1925-1600-0150	79PZ0181	ADDRESS SHEET FOR LCD1920
BALB	1936-1100-4110	79PZ0182	BACK LBL LCD1920NX BN NEC
CARD	1925-1900-0010	79PZ0028	CARDBOARD FOR NMV
CART	1925-1200-3680	79PZ0176	CARTON LCD1920NX BN/BNBK
CAUT	1925-1400-1030	79PZ0180	CAUTION SHEET LCD1920NX B
CD	1925-1300-3720	79PZ0178	CD-ROM LCD1920NX BN/BNBK
CUBO	1925-1000-1180	79PZ0020	CUSHION BOTTOM (EPS) LCD1
CUTO	1925-1000-1170	79PZ0019	CUSHION TOP (EPS) LCD1920
MANU	1925-1300-3700	79PZ0177	MANUAL LCD1920NX BN/BNBK
PEBAG3	1925-1100-0230	79PZ0022	PE BAG 320*230*0.04T
PEBAG5	1925-1100-0420	79PZ0021	PE BAG 550*800*0.04T
SETU	1925-1400-0990	79PZ0179	SETUP SHEET LCD1920NX BN/

*** RESISTORS ***

D04	0130-0000-1859	79PZ0063	RES. CF 0.0H 1/4W J
D10	0130-4708-1859	79PZ0097	RES. CF 4.7H 1/4W J
L03	0130-2208-1858	79PZ0083	RES. CF 2.2H 1/8W J
L04	0130-0000-1858	79PZ0062	RES. CF 0.0H 1/8W J
L09	0130-1000-1858	79PZ0065	RES. CF 100H 1/8W J
PR13	0141-4700-3851	79PZ0106	ARRAY RES. A(X) 470H 4R J
PR14	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR27	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR28	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR29	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR30	0141-1009-3851	79PZ0105	ARRAY RES. A(X) 10H 4R J
PR31	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR32	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR51	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR52	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR53	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR54	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR55	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR56	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
PR57	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR58	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR59	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR60	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR61	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR62	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA17	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA18	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA21	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA22	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA25	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA26	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
R02	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R05	0130-7500-0055	79PZ0101	RES. CF 750H 1/10W J
R06	0130-5100-0055	79PZ0099	RES. CF 510H 1/10W J
R07	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R08	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R09	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R10	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R100	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R101	0130-9109-0055	79PZ0102	RES. CF 91H 1/10W J
R103	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R104	0130-4302-0055	79PZ0094	RES. CF 43K 1/10W J
R105	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R106	0130-2202-0055	79PZ0080	RES. CF 22K 1/10W J
R107	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R109	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R11	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R110	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R111	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R112	0130-4302-0055	79PZ0094	RES. CF 43K 1/10W J
R114	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R115	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R116	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R119	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R12	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R121	0130-2700-0055	79PZ0086	RES. CF 270H 1/10W J
R122	0130-2700-0055	79PZ0086	RES. CF 270H 1/10W J
R123	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R124	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R125	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R126	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R127	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R128	0130-2700-0055	79PZ0086	RES. CF 270H 1/10W J
R130	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R132	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R133	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R135	0130-1000-0055	79PZ0064	RES. CF 100H 1/10W J

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
R138	0130-1002-1859	79PZ0068	RES. CF 10K 1/4W J
R14	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R140	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R142	0130-3901-0055	79PZ0093	RES. CF 3.9K 1/10W J
R143	0130-2401-0055	79PZ0085	RES. CF 2.4K 1/10W J
R144	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R145	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R146	0130-2200-0055	79PZ0077	RES. CF 220H 1/10W J
R147	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R148	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R149	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R15	0130-2203-0055	79PZ0081	RES. CF 220K 1/10W J
R150	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R151	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R152	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R154	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R157	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R158	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R159	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R16	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R160	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R161	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R162	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R163	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R164	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R165	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R166	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R167	0130-2208-0055	79PZ0082	RES. CF 2.2H 1/10W J
R168	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R169	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R17	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R170	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R171	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R172	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R173	0130-1000-0055	79PZ0064	RES. CF 100H 1/10W J
R174	0130-0000-1858	79PZ0062	RES. CF 0.0H 1/8W J
R175	0130-2208-0055	79PZ0082	RES. CF 2.2H 1/10W J
R176	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R178	0130-0000-1858	79PZ0062	RES. CF 0.0H 1/8W J
R18	0130-2202-0055	79PZ0080	RES. CF 22K 1/10W J
R180	0130-3300-0055	79PZ0089	RES. CF 330H 1/10W J
R182	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R183	0130-5609-0055	79PZ0100	RES. CF 56H 1/10W J
R184	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R185	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R187	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R189	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R19	0130-1000-0055	79PZ0064	RES. CF 100H 1/10W J

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
R190	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R192	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R194	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R196	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R197	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R198	0130-2200-0055	79PZ0077	RES. CF 220H 1/10W J
R199	0130-1200-0055	79PZ0071	RES. CF 120H 1/10W J
R202	0130-2200-1450	79PZ0078	RES. CF 220H 1/4W J A
R203	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R204	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R205	0130-2001-0055	79PZ0075	RES. CF 2K 1/10W J
R206	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R207	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R209	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R21	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R210	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R211	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R212	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R213	0130-3309-1859	79PZ0092	RES. CF 33H 1/8W J
R214	0130-3309-1859	79PZ0092	RES. CF 33H 1/8W J
R215	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R216	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R217	0130-1500-1250	79PZ0073	RES. CF 150H 1/2W J A
R23	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R24	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R25	0130-2703-0055	79PZ0087	RES. CF 270K 1/10W J
R29	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R30	0131-0000-0015	79PZ0103	RES. MF 0.0H 1/10W F
R32	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R33	0130-2703-0055	79PZ0087	RES. CF 270K 1/10W J
R34	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R35	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R36	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R38	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R41	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R42	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R43	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R44	0130-5100-0055	79PZ0099	RES. CF 510H 1/10W J
R45	0130-1000-0055	79PZ0064	RES. CF 100H 1/10W J
R46	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R47	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R48	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R49	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R50	0130-3001-0055	79PZ0088	RES. CF 3.0K 1/10W J
R52	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R54	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R55	0130-2002-0055	79PZ0076	RES. CF 20K 1/10W J
R56	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
R59	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R60	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R61	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R64	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R65	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R66	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R68	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R69	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R70	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R71	0130-1003-0055	79PZ0069	RES. CF 100K 1/10W J
R74	0130-3303-0055	79PZ0091	RES. CF 330K 1/10W J
R75	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R76	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R77	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R79	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R80	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R82	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R84	0130-2700-0055	79PZ0086	RES. CF 270H 1/10W J
R86	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R87	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R88	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R89	0130-2202-0055	79PZ0080	RES. CF 22K 1/10W J
R95	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R96	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R97	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R98	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R99	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J

*** CAPACITORS ***

C01	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C02	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C03	0111-3221-5106	79PZ0054	C/M MULTI 220PF 50V NPO
C04	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C05	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C06	0111-3200-5106	79PZ0052	C/M MULTI. 20PF 50V NPO
C07	0111-3200-5106	79PZ0052	C/M MULTI. 20PF 50V NPO
C10	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C101	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C103	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C104	0111-3221-5106	79PZ0054	C/M MULTI 220PF 50V NPO
C106	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C107	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C108	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C109	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C110	0101-4331-1310	79PZ0043	E/C H-R 330UF 25V 105' N-
C114	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C115	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C116	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
C117	0111-3100-5106	79PZ0048	C/M MULTI. 10PF 50V NPO
C118	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C119	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C12	0101-1471-1311	79PZ0042	E/C GEN. 470UF 25V 105' F
C124	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C127	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C129	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C130	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C131	0101-1471-1211	79PZ0041	E/C GEN. 470UF 16V 105' F
C132	0101-1471-1211	79PZ0041	E/C GEN. 470UF 16V 105' F
C133	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C134	0101-1471-1211	79PZ0041	E/C GEN. 470UF 16V 105' F
C135	0101-1471-1211	79PZ0041	E/C GEN. 470UF 16V 105' F
C136	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C137	0101-7100-1214	79PZ0044	E/C CHIP TYPE 10UF 16V 10
C138	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C139	0101-7100-1214	79PZ0044	E/C CHIP TYPE 10UF 16V 10
C14	0111-3471-5106	79PZ0060	C/M MULTI 470PF 50V NPO
C140	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C141	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C142	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C143	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C144	0101-7220-1214	79PZ0046	E/C CHIP TYPE 22UF 16V 10
C145	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C149	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C15	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C150	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C152	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C153	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C154	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C157	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C158	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C159	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C16	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C160	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C161	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C162	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C163	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C164	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C165	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C166	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C167	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C168	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C169	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C17	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C170	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C171	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C172	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
C175	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C176	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C177	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C178	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C179	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C18	0111-3100-5106	79PZ0048	C/M MULTI. 10PF 50V NPO
C180	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C181	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C182	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C183	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C184	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C185	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C186	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C187	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C188	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C189	0111-3221-5106	79PZ0054	C/M MULTI 220PF 50V NPO
C19	0101-7109-1514	79PZ0045	E/C CHIP TYPE 1UF 50V 105
C198	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C199	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C20	0111-3332-5116	79PZ0056	C/M MULTI. 3300PF 50V X7R
C200	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C201	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C202	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C203	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C204	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C205	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C206	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C207	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C208	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C209	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C21	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C210	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C211	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C23	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C24	0101-4331-1310	79PZ0043	E/C H-R 330UF 25V 105' N-
C25	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C27	0111-3270-5106	79PZ0055	C/M MULTI. 27PF 50V NPO
C30	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C31	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C32	0111-3100-5106	79PZ0048	C/M MULTI. 10PF 50V NPO
C33	0111-3101-5106	79PZ0049	C/M MULTI. 100PF 50V NPO
C35	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C36	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C37	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C38	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C39	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C40	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C41	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
C42	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C43	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C44	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C45	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C46	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C47	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C48	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C49	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C50	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C51	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C52	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C53	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C54	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C55	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C56	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C57	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C58	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C59	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C60	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C61	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C62	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C63	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C64	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C65	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C66	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C67	0111-3471-5106	79PZ0060	C/M MULTI 470PF 50V NPO
C69	0101-7470-1114	79PZ0047	E/C CHIP TYPE 47UF 10V 10
C70	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C71	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C72	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C73	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C74	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C77	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C78	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C79	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C80	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C81	0111-3393-1616	79PZ0058	C/M MULTI 0.039UF 16V X7R
C82	0111-3392-5116	79PZ0057	C/M MULTI 3900PF 50V X7R
C83	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C84	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C85	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C86	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C89	0111-3221-5106	79PZ0054	C/M MULTI 220PF 50V NPO
C91	0111-3200-5106	79PZ0052	C/M MULTI. 20PF 50V NPO
C92	0111-3200-5106	79PZ0052	C/M MULTI. 20PF 50V NPO
C93	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C94	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C95	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
C96	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C97	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C98	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C99	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO

REPLACEMENT PARTS LIST

The components specified for Model LCD1920NX-BK(B)

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
*** ICS ***			
IC01	0430-8000-3846	79PZ0154	IC AD9884AKS-140 SMD 128P
IC02	0430-7007-4939	79PZ0151	IC AM121-2 SMD 160 PIN
IC03	0430-7000-6015	79PZ0148	IC TLC2933IPWR SMD 14PIN
IC04	0430-7007-7040	79PZ0152	IC MTV118P-49 16PIN
IC06	0430-1004-1035	79PZ0141	IC 74F153SC SMD 16PIN
IC07X	0990-0000-4400	79PZ0156	S/W RDT191S EEPROM(IC07)
IC08	0430-6002-0007	79PZ0146	IC LD1117S-ADJ SMD
IC09	0430-1003-3635	79PZ0138	IC 74LCX245MTCX SMD 20PIN
IC11	0430-7007-9738	79PZ0153	IC SII153BCT100 SMD 100PI
IC12	0430-0000-6004	79PZ0133	IC CD4049UBM SMD 16PIN
IC14	0430-3001-1011	79PZ0144	IC AT24C02N-10SC-2.7 SMD
IC15	0430-1003-0035	79PZ0137	IC DM74LS14MX SMD 14PIN
IC16	0430-0000-8035	79PZ0134	IC MM74HC4053WMX SMD 16PI
IC17	0430-1004-0635	79PZ0140	IC DM74LS86 SMD 14PIN
IC18	0420-1001-3601	79PZ0132	POWER MOS IRF7304 SMD 8PI
IC19	0420-1001-3601	79PZ0132	POWER MOS IRF7304 SMD 8PI
IC20	0430-4000-2004	79PZ0145	IC LM339M SMD-14 T
IC21	0420-1001-3601	79PZ0132	POWER MOS IRF7304 SMD 8PI
IC22	0420-1001-3601	79PZ0132	POWER MOS IRF7304 SMD 8PI
IC23	0430-1000-7035	79PZ0135	IC 74HC14 SMD 14PIN
IC24X	0990-0000-4500	79PZ0157	S/W RDT191S EEPROM(IC24)
IC25X	0990-2000-4406	79PZ0161	SOFTWARE LCD1920NX CPU:NE
IC26	0430-3000-2017	79PZ0143	IC MP24LC21AT/SN SMD 8PIN
IC27	0430-1000-8035	79PZ0136	IC MM74HC74AMX SMD 14PIN
IC28	0430-1000-7035	79PZ0135	IC 74HC14 SMD 14PIN
IC29	0430-1003-8635	79PZ0139	IC MM74HC08 SMD 14PIN
IC30	0430-1005-2035	79PZ0142	IC 74VHC32 SMD 14PIN
IC31	0430-6002-5051	79PZ0147	IC AMC7588-ADJ SMD 3PIN
IC33	0430-1000-8035	79PZ0136	IC MM74HC74AMX SMD 14PIN
IC34	0430-1003-8635	79PZ0139	IC MM74HC08 SMD 14PIN
IC36	0430-7003-7650	79PZ0149	IC THC63LVDM83A SMD 56PIN
IC37	0430-7003-7650	79PZ0149	IC THC63LVDM83A SMD 56PIN
Q30	0430-7004-4319	79PZ0150	IC PST994D TO-92 3PIN D=4
*** TRANSISTORS ***			
Q01	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q02	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q03	0410-5000-2610	79PZ0131	TRANSISTOR MMBT3906LT1 SM
Q04	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q05	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q06	0410-0000-2106	79PZ0129	TRANSISTOR 2SA673AC TO-92

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
Q08	0410-0000-2106	79PZ0129	TRANSISTOR 2SA673AC TO-92
Q09	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q10	0410-0000-2106	79PZ0129	TRANSISTOR 2SA673AC TO-92
Q11	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q12	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q13	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q14	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q16	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q19	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM
Q25	0410-5000-1610	79PZ0130	TRANSISTOR MMBT3904LT1 SM

*** DIODES ***

D01	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D02	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D05	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D06	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D07	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D08	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D09	0390-5001-8293	79PZ0123	DUAL SURFACE DIODES BAV70
D11	0400-0541-2012	79PZ0128	ZENER RLZ5.6B 5.45V~5.73V
D115	0390-5000-4202	79PZ0122	GEN. DIODE 1N4004F T
D116	0390-6000-1012	79PZ0125	SCHOTTKY DIODE 11DQ06 T
D12	0400-0541-2012	79PZ0128	ZENER RLZ5.6B 5.45V~5.73V
D13	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D14	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D15	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D17	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D18	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D19	0390-6000-9172	79PZ0126	SCHOTTKY DIODE SB340 T
D20	0390-6000-9172	79PZ0126	SCHOTTKY DIODE SB340 T
D24	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
D26	0390-5001-8293	79PZ0123	DUAL SURFACE DIODES BAV70
D27	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D28	0390-5001-9293	79PZ0124	DUAL SURFACE DIODES BAV99
D31	0390-5000-1053	79PZ0121	GEN. DIODE 1N4148 SMD
LED01	0440-5000-0020	79PZ0155	LED L-59GYW 5
ZD03	0400-0511-2000	79PZ0127	ZENER 5C3 5.1-5.3V 1/2W
ZD04	0400-0511-2000	79PZ0127	ZENER 5C3 5.1-5.3V 1/2W

*** RELAYS & SWITCHES ***

SW1	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P
SW2	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P
SW3	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P
SW4	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P
SW5	0220-7020-0167	79PZ0109	SW TACTILE 6*6MM 4P

*** PWB ASSYS ***

DISBD	3190-0032-0156	79PZ0013	LCD DISPLAY BD ASS'Y

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
INV	0500-0105-0302	79PZ0008	INVERTER DC-AC T65I008.00
MAINBD	3190-0142-0150	79PZ0014	LCD MAIN BD ASS'Y

*** COILS & FILTERS ***

L01	0370-0000-1010	79PZ0113	FERRITE CORE RH 3.5X6X1.0
L02	0370-0000-1010	79PZ0113	FERRITE CORE RH 3.5X6X1.0
L05	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L06	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L07	0370-0000-1110	79PZ0114	FERRITE CORE W8 R6H 6X10
L08	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L11	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L16	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L160	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L161	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L20	0370-0000-3552	79PZ0116	CHIP BEAD CORE 30H
L21	0370-0000-3552	79PZ0116	CHIP BEAD CORE 30H
L22	0370-0000-3552	79PZ0116	CHIP BEAD CORE 30H
L23	0370-0000-5842	79PZ0118	CHIP BEAD CORE 40H
L24	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
L25	0370-0000-5942	79PZ0119	CHIP BEAD CORE 60H
L26	0370-0000-5842	79PZ0118	CHIP BEAD CORE 40H
L32	0370-0000-1110	79PZ0114	FERRITE CORE W8 R6H 6X10
L33	0361-1000-0120	79PZ0112	DRUM CORE L:70UH 2A(10*16
L34	0361-1000-0120	79PZ0112	DRUM CORE L:70UH 2A(10*16
L35	0344-6880-0603	79PZ0111	PEAKING COIL 0.68UH 1/4W
PRA01	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA02	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA05	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA06	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA09	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRA10	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB03	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB04	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB07	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB08	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB11	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
PRB12	0370-0010-0161	79PZ0120	ARRAY BEAD 120H
R39	0370-0000-4651	79PZ0117	CHIP BEAD CORE 80H
R40	0370-0000-4651	79PZ0117	CHIP BEAD CORE 80H
R72	0370-0000-2143	79PZ0115	CHIP BEAD CORE 600H
R73	0370-0000-2143	79PZ0115	CHIP BEAD CORE 600H

*** ELECTRICAL PARTS & MISCELLANEOUS PARTS ***

ADAP	0300-7012-4414	79PZ0015	AC TO DC ADAPTOR (LSE9901
F1	0182-1502-3703	79PZ0108	PICO FUSE 125V 5A 3*7MM
LCD	0211-0190-0165	79PZ0004	LCD MODULE 19.0 TFT FLC4"
POWCD	0320-3000-0050	79PZ0175	POWER CORD 2000MM 220V VD
SCSUB	0321-0000-0100	79PZ0018	S.CABLE 2000MM 15(3R-3R)

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
WHFI	0460-3430-0130	79PZ0007	WH FI-X30S-H/DF14-30S 157
WHPH8	0460-1008-0110	79PZ0005	WH PH8P-PH8P 1007#24 65MM
WHPH9	0460-1009-0210	79PZ0006	WH PH9P-PH9P 1061#26 190M
XR02	0280-1100-0013	79PZ0110	X'TAL 11.0592MHZ

*** APPEARANCE PARTS ***

BACA	1701-0507-9010	79PZ0001	BASE CAB. LCD1920NX
BACO	1801-0204-6010	79PZ0172	BACK COVER CAB. LCD1920NX
BAFO	1701-1000-0071	79PZ0032	BASE FOOT (18.0*3.0T)
BARO	1712-0100-3120	79PZ0003	BASE ROTATE LCD1920NX
HICO	1701-1901-8010	79PZ0010	HINGE COVER LCD1920NX (
PACA	1801-0110-1020	79PZ0171	PANEL CAB. LCD1920NX (NEC
POWBU	1701-0409-4010	79PZ0009	POWER BUTTON LCD1920NX

*** PRINTED & PACKING MATERIALS ***

ADDR	1925-1600-0150	79PZ0181	ADDRESS SHEET FOR LCD1920
BALB	1936-1100-4120	79PZ0183	BACK LBL LCD1920NX BNBK N
CARD	1925-1900-0010	79PZ0028	CARDBOARD FOR NMV
CART	1925-1200-3680	79PZ0176	CARTON LCD1920NX BN/BNBK
CAUT	1925-1400-1030	79PZ0180	CAUTION SHEET LCD1920NX B
CD	1925-1300-3720	79PZ0178	CD-ROM LCD1920NX BN/BNBK
CUBO	1925-1000-1180	79PZ0020	CUSHION BOTTOM (EPS) LCD1
CUTO	1925-1000-1170	79PZ0019	CUSHION TOP (EPS) LCD1920
MANU	1925-1300-3700	79PZ0177	MANUAL LCD1920NX BN/BNBK
PEBAG3	1925-1100-0230	79PZ0022	PE BAG 320*230*0.04T
PEBAG5	1925-1100-0420	79PZ0021	PE BAG 550*800*0.04T
SETU	1925-1400-0990	79PZ0179	SETUP SHEET LCD1920NX BN/

*** RESISTORS ***

D04	0130-0000-1859	79PZ0063	RES. CF 0.0H 1/4W J
D10	0130-4708-1859	79PZ0097	RES. CF 4.7H 1/4W J
L03	0130-2208-1858	79PZ0083	RES. CF 2.2H 1/8W J
L04	0130-0000-1858	79PZ0062	RES. CF 0.0H 1/8W J
L09	0130-1000-1858	79PZ0065	RES. CF 100H 1/8W J
PR13	0141-4700-3851	79PZ0106	ARRAY RES. A(X) 470H 4R J
PR14	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR27	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR28	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR29	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR30	0141-1009-3851	79PZ0105	ARRAY RES. A(X) 10H 4R J
PR31	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR32	0141-1002-3851	79PZ0104	ARRAY RES. A(X) 10K 4R J
PR51	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR52	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR53	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR54	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR55	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR56	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
PR57	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR58	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR59	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR60	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR61	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PR62	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA17	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA18	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA21	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA22	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA25	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
PRA26	0141-4709-3851	79PZ0107	ARRAY RES. A(X) 47H 4R J
R02	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R05	0130-7500-0055	79PZ0101	RES. CF 750H 1/10W J
R06	0130-5100-0055	79PZ0099	RES. CF 510H 1/10W J
R07	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R08	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R09	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R10	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R100	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R101	0130-9109-0055	79PZ0102	RES. CF 91H 1/10W J
R103	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R104	0130-4302-0055	79PZ0094	RES. CF 43K 1/10W J
R105	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R106	0130-2202-0055	79PZ0080	RES. CF 22K 1/10W J
R107	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R109	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R11	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R110	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R111	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R112	0130-4302-0055	79PZ0094	RES. CF 43K 1/10W J
R114	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R115	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R116	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R119	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R12	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R121	0130-2700-0055	79PZ0086	RES. CF 270H 1/10W J
R122	0130-2700-0055	79PZ0086	RES. CF 270H 1/10W J
R123	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R124	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R125	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R126	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R127	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R128	0130-2700-0055	79PZ0086	RES. CF 270H 1/10W J
R130	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R132	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R133	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R135	0130-1000-0055	79PZ0064	RES. CF 100H 1/10W J

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
R138	0130-1002-1859	79PZ0068	RES. CF 10K 1/4W J
R14	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R140	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R142	0130-3901-0055	79PZ0093	RES. CF 3.9K 1/10W J
R143	0130-2401-0055	79PZ0085	RES. CF 2.4K 1/10W J
R144	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R145	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R146	0130-2200-0055	79PZ0077	RES. CF 220H 1/10W J
R147	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R148	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R149	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R15	0130-2203-0055	79PZ0081	RES. CF 220K 1/10W J
R150	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R151	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R152	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R154	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R157	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R158	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R159	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R16	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R160	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R161	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R162	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R163	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R164	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R165	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R166	0130-1009-0055	79PZ0070	RES. CF 10H 1/10W J
R167	0130-2208-0055	79PZ0082	RES. CF 2.2H 1/10W J
R168	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R169	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R17	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R170	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R171	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R172	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R173	0130-1000-0055	79PZ0064	RES. CF 100H 1/10W J
R174	0130-0000-1858	79PZ0062	RES. CF 0.0H 1/8W J
R175	0130-2208-0055	79PZ0082	RES. CF 2.2H 1/10W J
R176	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R178	0130-0000-1858	79PZ0062	RES. CF 0.0H 1/8W J
R18	0130-2202-0055	79PZ0080	RES. CF 22K 1/10W J
R180	0130-3300-0055	79PZ0089	RES. CF 330H 1/10W J
R182	0130-3301-0055	79PZ0090	RES. CF 3.3K 1/10W J
R183	0130-5609-0055	79PZ0100	RES. CF 56H 1/10W J
R184	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R185	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R187	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R189	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R19	0130-1000-0055	79PZ0064	RES. CF 100H 1/10W J

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
R190	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R192	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R194	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R196	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R197	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R198	0130-2200-0055	79PZ0077	RES. CF 220H 1/10W J
R199	0130-1200-0055	79PZ0071	RES. CF 120H 1/10W J
R202	0130-2200-1450	79PZ0078	RES. CF 220H 1/4W J A
R203	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R204	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R205	0130-2001-0055	79PZ0075	RES. CF 2K 1/10W J
R206	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R207	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R209	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R21	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R210	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R211	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R212	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R213	0130-3309-1859	79PZ0092	RES. CF 33H 1/8W J
R214	0130-3309-1859	79PZ0092	RES. CF 33H 1/8W J
R215	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R216	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R217	0130-1500-1250	79PZ0073	RES. CF 150H 1/2W J A
R23	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R24	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R25	0130-2703-0055	79PZ0087	RES. CF 270K 1/10W J
R29	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R30	0131-0000-0015	79PZ0103	RES. MF 0.0H 1/10W F
R32	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R33	0130-2703-0055	79PZ0087	RES. CF 270K 1/10W J
R34	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R35	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R36	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R38	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R41	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R42	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R43	0130-1500-1858	79PZ0074	RES. CF 150H 1/8W J
R44	0130-5100-0055	79PZ0099	RES. CF 510H 1/10W J
R45	0130-1000-0055	79PZ0064	RES. CF 100H 1/10W J
R46	0130-4700-0055	79PZ0095	RES. CF 470H 1/10W J
R47	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R48	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R49	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R50	0130-3001-0055	79PZ0088	RES. CF 3.0K 1/10W J
R52	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R54	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R55	0130-2002-0055	79PZ0076	RES. CF 20K 1/10W J
R56	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
R59	0130-0000-0055	79PZ0061	RES. CF 0.0H 1/10W J
R60	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R61	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R64	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R65	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R66	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R68	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R69	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R70	0130-4709-0055	79PZ0098	RES. CF 47H 1/10W J
R71	0130-1003-0055	79PZ0069	RES. CF 100K 1/10W J
R74	0130-3303-0055	79PZ0091	RES. CF 330K 1/10W J
R75	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R76	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R77	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R79	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R80	0130-1500-0055	79PZ0072	RES. CF 150H 1/10W J
R82	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R84	0130-2700-0055	79PZ0086	RES. CF 270H 1/10W J
R86	0130-2209-0055	79PZ0084	RES. CF 22H 1/10W J
R87	0130-2201-0055	79PZ0079	RES. CF 2.2K 1/10W J
R88	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R89	0130-2202-0055	79PZ0080	RES. CF 22K 1/10W J
R95	0130-1001-0055	79PZ0066	RES. CF 1.0K 1/10W J
R96	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J
R97	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R98	0130-1002-0055	79PZ0067	RES. CF 10K 1/10W J
R99	0130-4701-0055	79PZ0096	RES. CF 4.7K 1/10W J

*** CAPACITORS ***

C01	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C02	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C03	0111-3221-5106	79PZ0054	C/M MULTI 220PF 50V NPO
C04	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C05	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C06	0111-3200-5106	79PZ0052	C/M MULTI. 20PF 50V NPO
C07	0111-3200-5106	79PZ0052	C/M MULTI. 20PF 50V NPO
C10	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C101	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C103	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C104	0111-3221-5106	79PZ0054	C/M MULTI 220PF 50V NPO
C106	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C107	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C108	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C109	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C110	0101-4331-1310	79PZ0043	E/C H-R 330UF 25V 105' N-
C114	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C115	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C116	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V

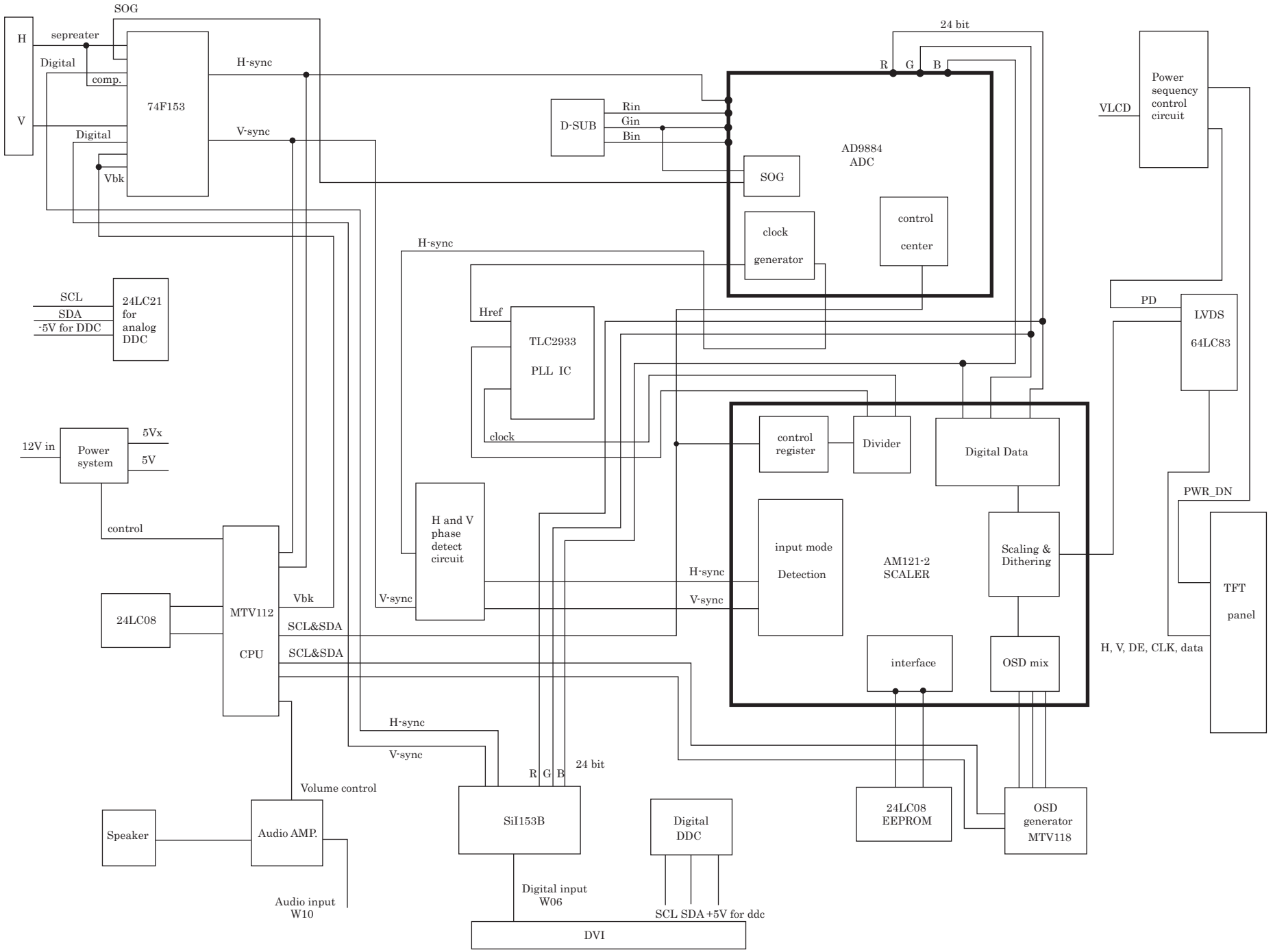
SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
C117	0111-3100-5106	79PZ0048	C/M MULTI. 10PF 50V NPO
C118	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C119	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C12	0101-1471-1311	79PZ0042	E/C GEN. 470UF 25V 105' F
C124	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C127	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C129	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C130	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C131	0101-1471-1211	79PZ0041	E/C GEN. 470UF 16V 105' F
C132	0101-1471-1211	79PZ0041	E/C GEN. 470UF 16V 105' F
C133	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C134	0101-1471-1211	79PZ0041	E/C GEN. 470UF 16V 105' F
C135	0101-1471-1211	79PZ0041	E/C GEN. 470UF 16V 105' F
C136	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C137	0101-7100-1214	79PZ0044	E/C CHIP TYPE 10UF 16V 10
C138	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C139	0101-7100-1214	79PZ0044	E/C CHIP TYPE 10UF 16V 10
C14	0111-3471-5106	79PZ0060	C/M MULTI 470PF 50V NPO
C140	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C141	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C142	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C143	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C144	0101-7220-1214	79PZ0046	E/C CHIP TYPE 22UF 16V 10
C145	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C149	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C15	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C150	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C152	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C153	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C154	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C157	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C158	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C159	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C16	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C160	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C161	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C162	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C163	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C164	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C165	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C166	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C167	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C168	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C169	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C17	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C170	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C171	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C172	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
C175	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C176	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C177	0101-1101-1211	79PZ0039	E/C GEN. 100UF 16V 105' F
C178	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C179	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C18	0111-3100-5106	79PZ0048	C/M MULTI. 10PF 50V NPO
C180	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C181	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C182	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C183	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C184	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C185	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C186	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C187	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C188	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C189	0111-3221-5106	79PZ0054	C/M MULTI 220PF 50V NPO
C19	0101-7109-1514	79PZ0045	E/C CHIP TYPE 1UF 50V 105
C198	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C199	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C20	0111-3332-5116	79PZ0056	C/M MULTI. 3300PF 50V X7R
C200	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C201	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C202	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C203	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C204	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C205	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C206	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C207	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C208	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C209	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C21	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C210	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C211	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C23	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C24	0101-4331-1310	79PZ0043	E/C H-R 330UF 25V 105' N-
C25	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C27	0111-3270-5106	79PZ0055	C/M MULTI. 27PF 50V NPO
C30	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C31	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C32	0111-3100-5106	79PZ0048	C/M MULTI. 10PF 50V NPO
C33	0111-3101-5106	79PZ0049	C/M MULTI. 100PF 50V NPO
C35	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C36	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C37	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C38	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C39	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C40	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C41	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V

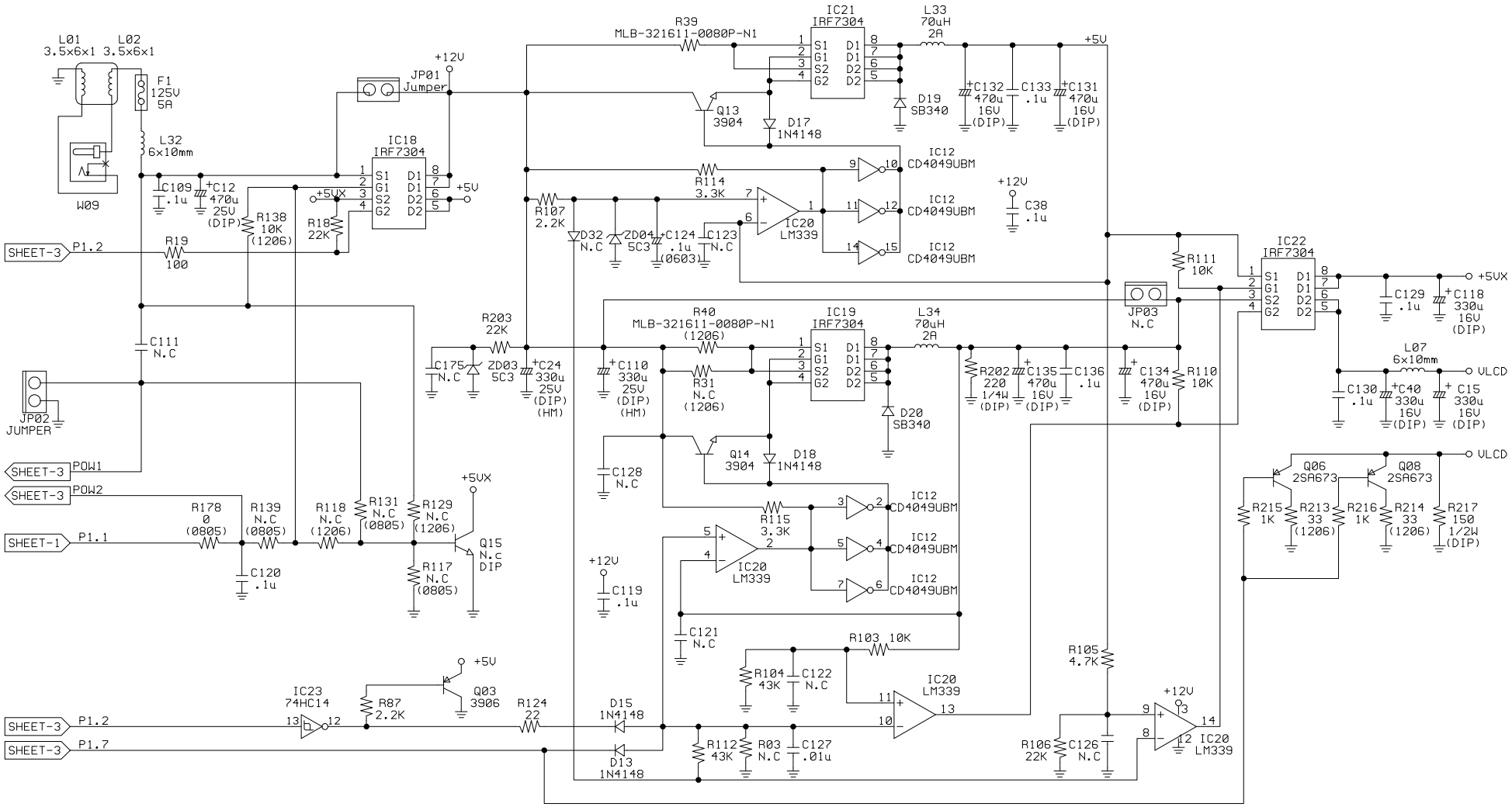
SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
C42	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C43	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C44	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C45	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C46	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C47	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C48	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C49	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C50	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C51	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C52	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C53	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C54	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C55	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C56	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C57	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C58	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C59	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C60	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C61	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C62	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C63	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C64	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C65	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C66	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C67	0111-3471-5106	79PZ0060	C/M MULTI 470PF 50V NPO
C69	0101-7470-1114	79PZ0047	E/C CHIP TYPE 47UF 10V 10
C70	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C71	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C72	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C73	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C74	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C77	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C78	0111-3103-5116	79PZ0050	C/M MULTI 0.01UF 50V X7R
C79	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C80	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C81	0111-3393-1616	79PZ0058	C/M MULTI 0.039UF 16V X7R
C82	0111-3392-5116	79PZ0057	C/M MULTI 3900PF 50V X7R
C83	0101-1331-1211	79PZ0040	E/C GEN. 330UF 16V 105' F
C84	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C85	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C86	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C89	0111-3221-5106	79PZ0054	C/M MULTI 220PF 50V NPO
C91	0111-3200-5106	79PZ0052	C/M MULTI. 20PF 50V NPO
C92	0111-3200-5106	79PZ0052	C/M MULTI. 20PF 50V NPO
C93	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C94	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V
C95	0111-3104-2536	79PZ0051	C/M MULTI. 0.1UF 25V Y5V

SYMBOL	Part No for AmTRAN	Part No for NMV	DESCRIPTION
C96	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C97	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO
C98	0111-3220-5106	79PZ0053	C/M MULTI. 22PF 50V NPO
C99	0111-3470-5106	79PZ0059	C/M MULTI. 47PF 50V NPO

BLOCK DIAGRAM MODEL LCD1920NX

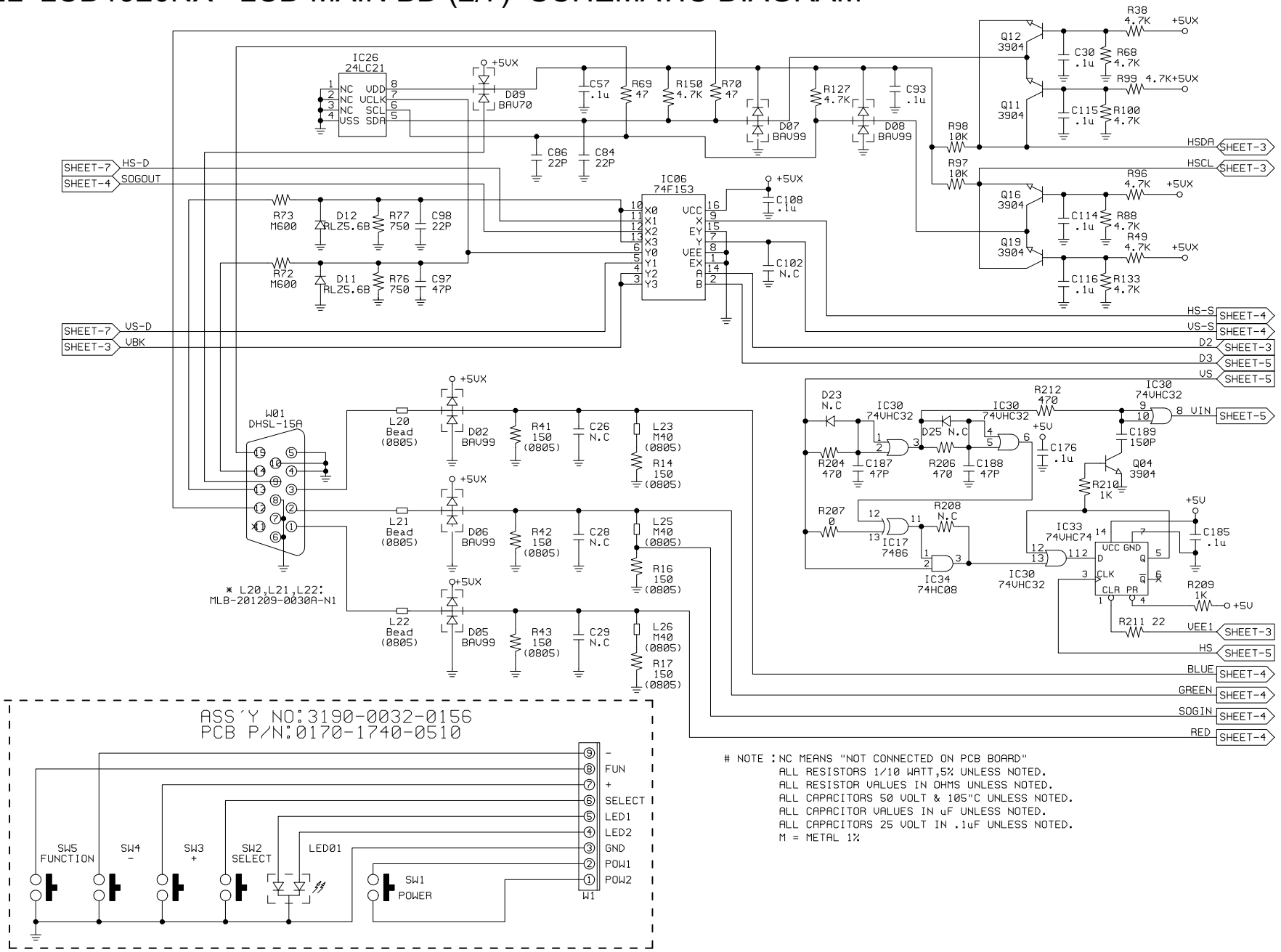


Schematic Diagram MODEL LCD1920NX LCD MAIN BD (1/7) SCHEMATIC DIAGRAM



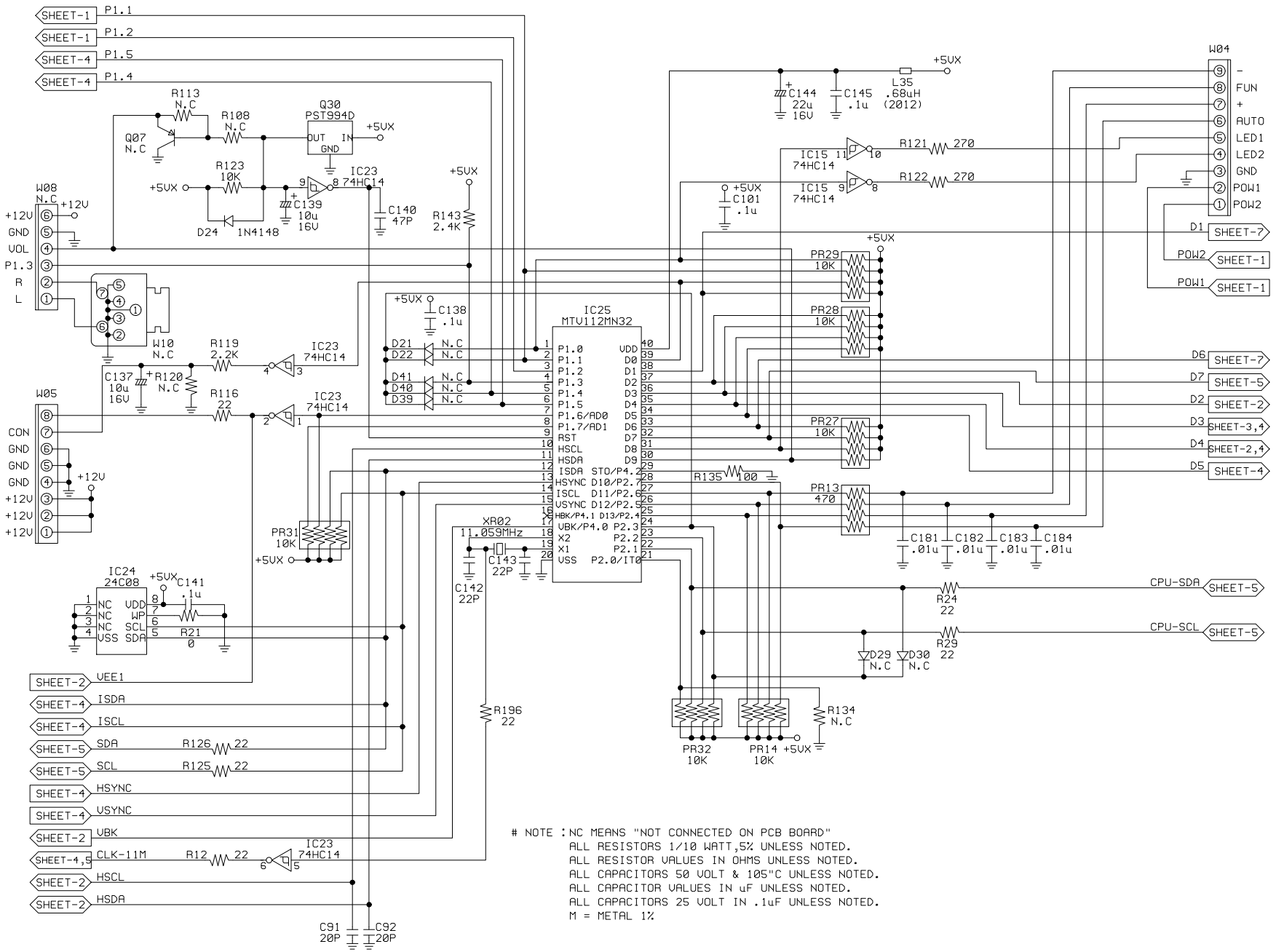
NOTE : NC MEANS "NOT CONNECTED ON PCB BOARD"
ALL RESISTORS 1/10 WATT,5% UNLESS NOTED.
ALL RESISTOR VALUES IN OHMS UNLESS NOTED.
ALL CAPACITORS 50 VOLT & 105"C UNLESS NOTED.
ALL CAPACITOR VALUES IN uF UNLESS NOTED.
ALL CAPACITORS 25 VOLT IN .1uF UNLESS NOTED.
M = METAL 1%

MODEL LCD1920NX LCD MAIN BD (2/7) SCHEMATIC DIAGRAM



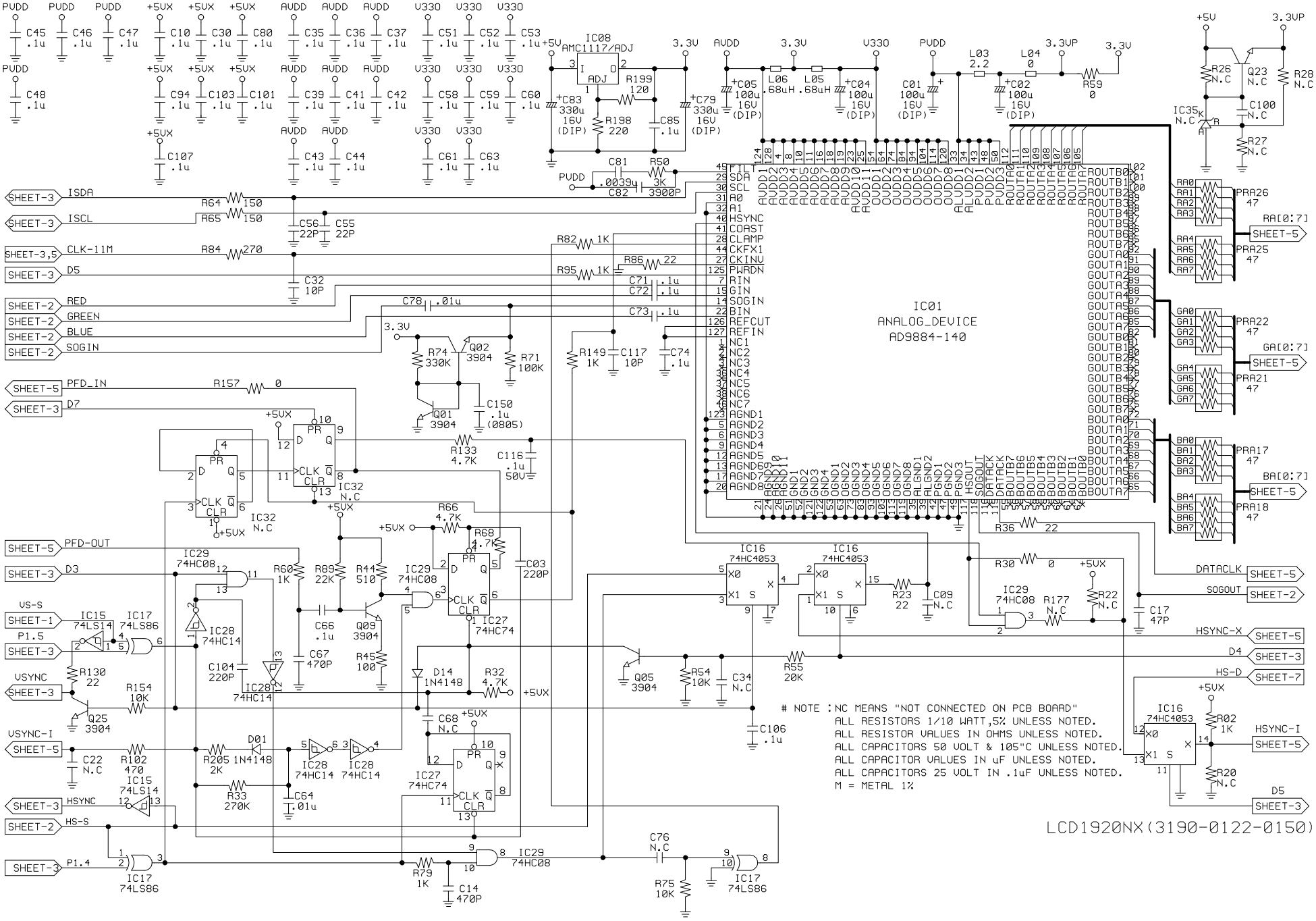
NOTE : NC MEANS "NOT CONNECTED ON PCB BOARD"
ALL RESISTORS 1/10 WATT,5% UNLESS NOTED.
ALL RESISTOR VALUES IN OHMS UNLESS NOTED.
ALL CAPACITORS 50 VOLT & 105"C UNLESS NOTED.
ALL CAPACITOR VALUES IN uF UNLESS NOTED.
ALL CAPACITORS 25 VOLT IN .1uF UNLESS NOTED.
M = METAL 1%

MODEL LCD1920NX LCD MAIN BD (3/7) SCHEMATIC DIAGRAM

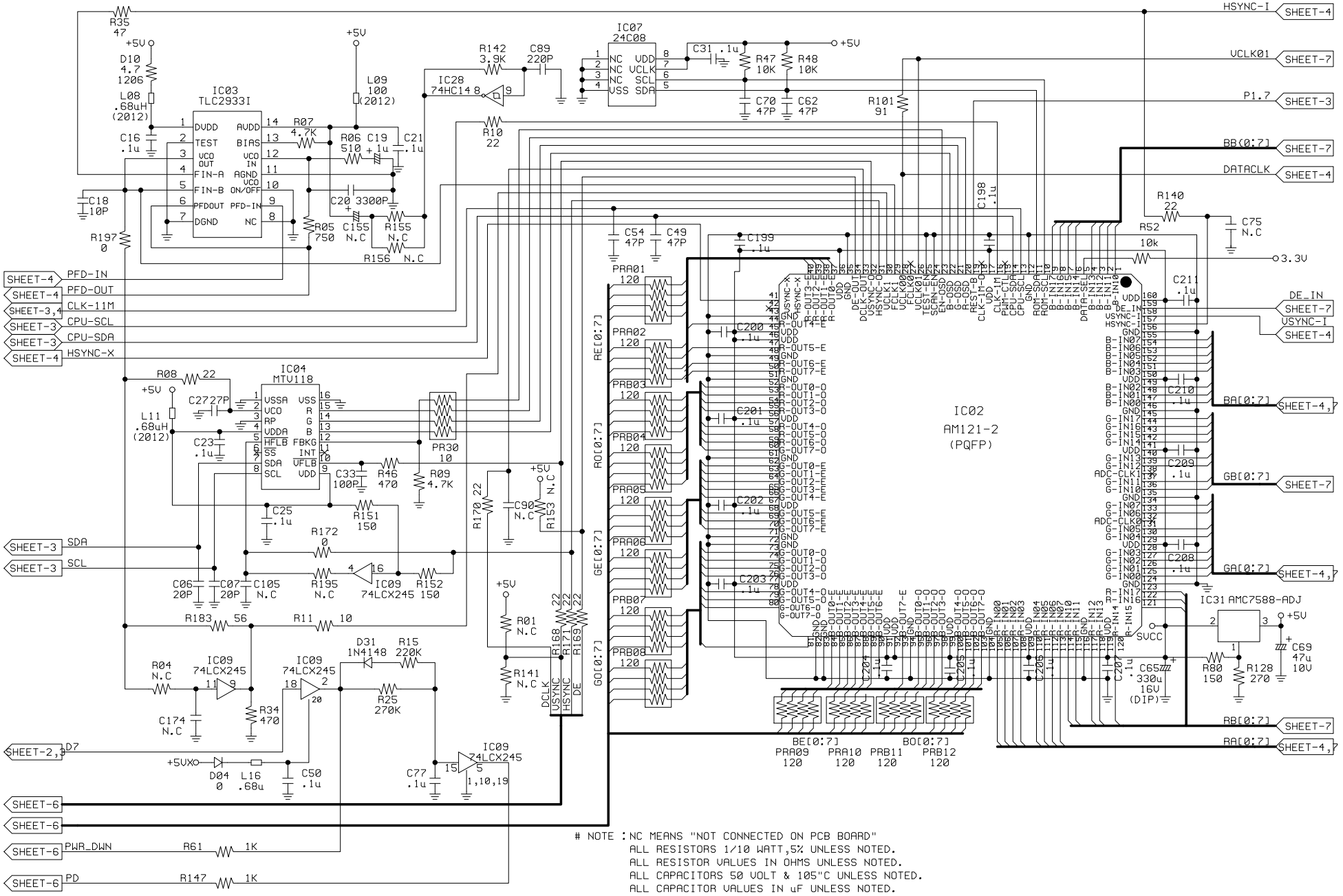


NOTE : NC MEANS "NOT CONNECTED ON PCB BOARD"
ALL RESISTORS 1/10 WATT,5% UNLESS NOTED.
ALL RESISTOR VALUES IN OHMS UNLESS NOTED.
ALL CAPACITORS 50 VOLT & 105"C UNLESS NOTED.
ALL CAPACITOR VALUES IN uF UNLESS NOTED.
ALL CAPACITORS 25 VOLT IN .1uF UNLESS NOTED.
M = METAL 1%

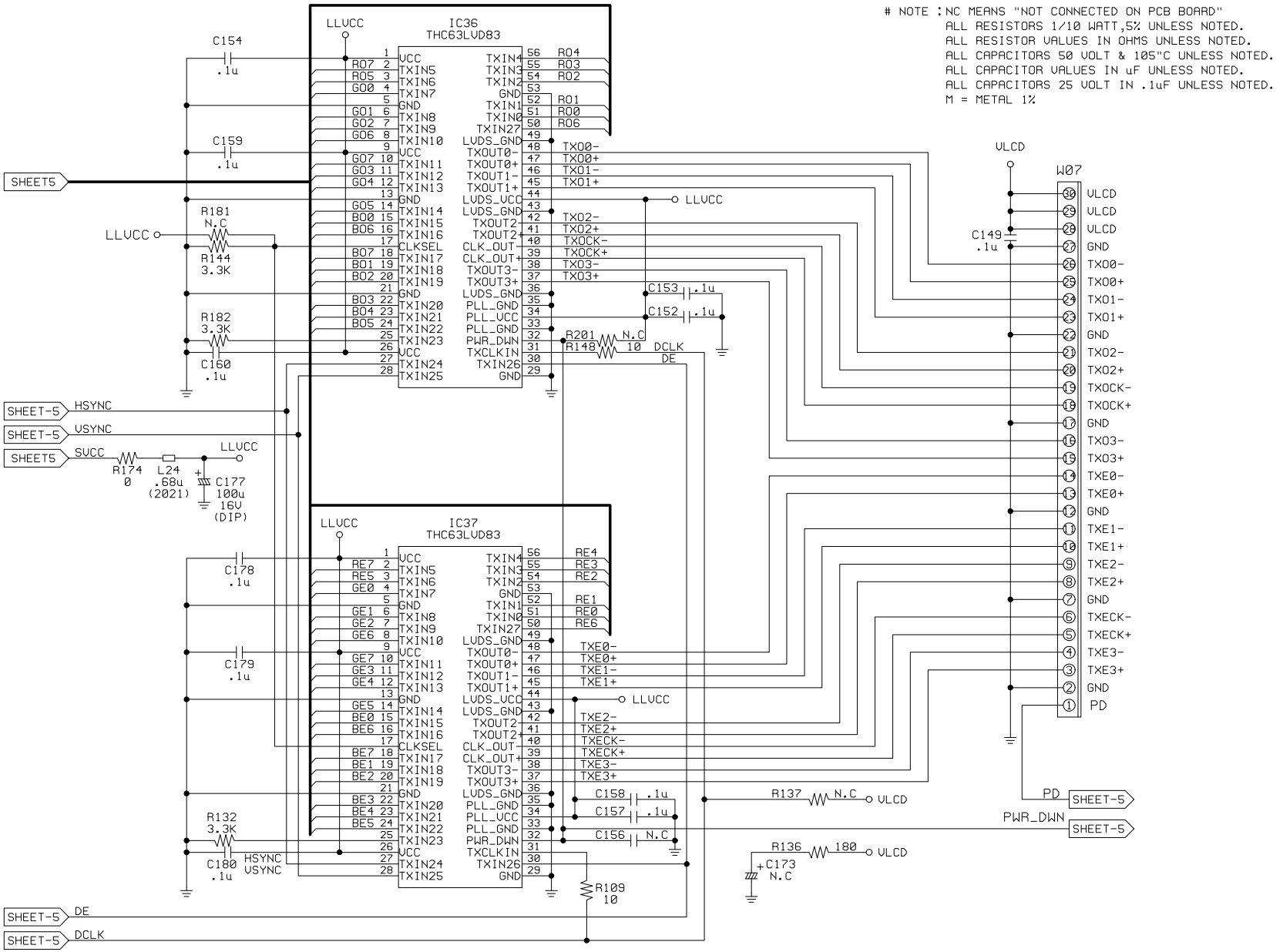
MODEL LCD1920NX LCD MAIN BD (4/7) SCHEMATIC DIAGRAM



MODEL LCD1920NX LCD MAIN BD (5/7) SCHEMATIC DIAGRAM



MODEL LCD1920NX LCD MAIN BD (6/7) SCHEMATIC DIAGRAM



MODEL LCD1920NX LCD MAIN BD (7/7) SCHEMATIC DIAGRAM

